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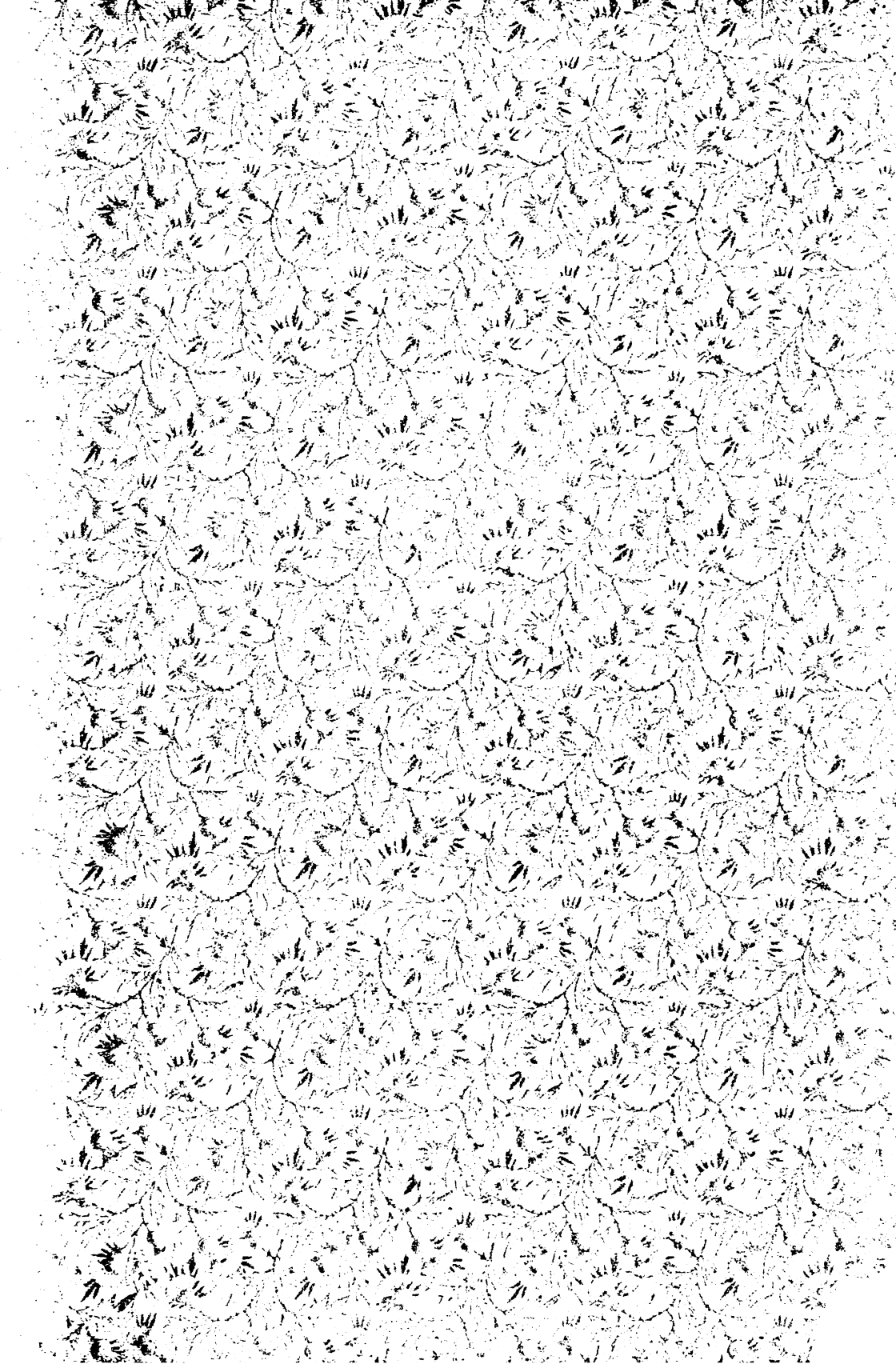
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\*DR. ISIDOR SINGER,

31 DEC. 08,

Fire  
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PROCEEDINGS  
OF THE  
FIFTEENTH REGULAR MEETING  
OF THE  
FIRE UNDERWRITERS'  
ASSOCIATION OF THE NORTHWEST.

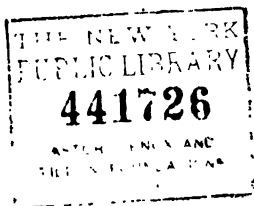


CHICAGO, ILL., SEPTEMBER 10 AND 11, 1884.

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PRINTED BY ORDER OF THE ASSOCIATION.  
1884.





CRAMER, AIKENS & CRAMER, PRINTERS,  
MILWAUKEE.

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"EX FUMO DARE LUCEM."—Hor.

FIFTEENTH REGULAR MEETING  
OF THE  
FIRE UNDERWRITERS' ASSOCIATION  
OF THE NORTHWEST.

PRESIDENT.

J. L. WHITLOCK, - - - - - Chicago.  
Manager Glens Falls Insurance Company, New York.

VICE PRESIDENT.

T. H. SMITH, - - - - - Chicago.  
Special Agent North British and Mercantile Insurance Company.

SECRETARY AND TREASURER.

J. C. GRIFFITHS, - - - - - Madison.  
State Agent Home Insurance Company, New York.

EXECUTIVE COMMITTEE.

ILLINOIS, - R. PORTER, Special Agent and Adjuster German-American  
Fire Ins. Co., - - - - - Chicago.  
MISSOURI, - S. E. WAGGONER, Special Agent North British and Mercantile, Macon.  
OHIO, - - - JACOB PEETREY, General Adjuster Queens Ins. Co., England, London.  
MINNESOTA, J. J. McDONALD, State Agent Continental Ins. Co., N. Y., - Minneapolis.  
WISCONSIN, GEO. W. HAYES, General Agent Western Assurance Co.,  
Toronto, - - - - - Milwaukee.  
COLORADO, D. C. COBB, General Agent Western of Toronto, and Traders'  
of Chicago, - - - - - Denver.  
MICHIGAN, F. E. BURT, Supervising Agent and Adjuster, Niagara, N. Y., Detroit.  
KENTUCKY, C. D. THOMPSON, Adjuster Liverpool and London and  
Globe, - - - - - Harrodsburg.  
INDIANA, - J. IRVING RIDDLE, Special Agent Phenix, Brooklyn, - Terre Haute.  
KANSAS, - - H. CLARKSON, Special Agent London Assurance Co., - Topeka.  
IOWA, - - - T. J. ZOLLARS, State Agent and Adjuster Connecticut of  
Hartford, - - - - - Ottumwa.  
NEBRASKA, THOMAS B. TUTTLE, State Agent Norwich Union, - - - Carthage, Mo.

AT LARGE.

I. S. BLACKWELDER, Manager Niagara Ins. Co., N. Y., - - - - - Chicago.  
R. J. SMITH, Secretary Traders' Ins. Co., - - - - - Chicago.  
W. B. CORNELL, Sup't Western Department North British and Mercantile, Chicago.  
J. P. BLACK, Adjuster Fireman's Fund, California, - - - - - Chicago.  
J. O. WILSON, Manager Star Fire Ins. Co., and Union, Philadelphia, - - - Chicago.

## PROGRAMME.

CHICAGO, September 10th and 11th, 1884.

Meeting of Executive Committee at 8 P. M., Sept. 9th, at the office of the North British & Mercantile Ins. Co., 161 La Salle St., and Sept. 10th, at 9 A. M., at the Hall.

Opening Session at 10 A. M. Sept. 10th.

Calling the Roll.

Reception of Visitors and Representatives of other Associations.

Report of the Executive Committee.

Report of the Secretary and Treasurer, J. C. GRIFFITHS, State Agent Home Ins. Co., N. Y.

Report of Librarian.

ADDRESS OF PRESIDENT CYRUS K. DREW, Special Agent Lancashire Ins. Co.

Appointment of Committees.

Unfinished Business.

INTERMISSION.

PAPER—"A Half Hour on Insurance Topics," J. B. BENNETT, Commissioner for Indiana.

ANNUAL ADDRESS, M. BENNETT JR., Manager Lion of England and Scottish Union and National of Edinburgh.

"An Effort to Ascertain What the Matter Is," illustrated with diagrams, C. C. HINE, Editor *Insurance Monitor*.

DISCUSSION—In a Special Hazard, what "Vacancy" renders Void or Voidable a Policy. Tidings from the Compacts.

INTERMISSION.

Evening Session, September 10th, 8 P. M.

LECTURE—"Spontaneous Combustion," PROF. JOHN M. ORDWAY, Boston.

### SECOND DAY.

#### REPORTS OF STATE BOARDS.

*Ohio*—J. M. DECAMP, President.

*Indiana*—BENJ. KELSEY, President.

*Michigan*—G. W. CHANDLER, President.

*Illinois*—O. E. CULBERTSON, President.

*Missouri, Kansas and Nebraska*—MILTON WELSH, President.

*Iowa Union*—E. S. PAGE, President.

*Wisconsin, Minnesota and Dakota Union*—C. W. POTTER, President.

PAPER—"Rates and the Co-Insurance Clause," W. F. FOX, General Adjuster.

Reports of Committees.

PAPER—"Incendiarism," MILO E. LAWRENCE, Special Agent Fireman's Fund and Union Insurance Co., of California.

INTERMISSION.

DISCUSSION—"Is State Supervision Desirable?"

PAPER—"The Essential Difference in the Fire Hazard in the United States and Western Europe," J. T. DARGAN, General Agent Fire Association of Philadelphia.

PAPER—"The Local Agent's Register: the State Agent's Gripsack: the Manager's Desk. A peep into each." I. W. HOLMAN, Gen'l Agent British America Assurance Co., of Toronto.

DISCUSSION—A Policy reads "On Wearing Apparel." Would a cork leg, a wig and artificial teeth be covered? If not, why not?

"Has Any Brother Anything to Offer for the Good of the Order?"

Election of Officers.

Unfinished Business.

Adjournment.

# PROCEEDINGS

OF THE

*Fifteenth Annual Meeting of the Fire Underwriters' Association of  
the Northwest, held at the Catholic Library Association  
Rooms, 204 Dearborn Street, Chicago,  
September 10 and 11, 1884.*

---

## FIRST DAY.

CHICAGO, ILL., Sept. 10, 1884.

The Association was called to order at 11 o'clock A. M., by  
Cyrus K. Drew, Esq., President.

The roll of membership was called and the following members were present:

Geo. W. Adams, D. F. Appel, J. T. Ashbrook, H. F. Atwood, J. B. Bennett, J. J. Berne, J. P. Black, I. S. Blackwelder, R. M. Buckman, M. J. Burns, R. B. Carson, H. Clarkson, W. B. Cornell, Jas. M. De Camp, Holger de Roode, C. K. Drew, W. F. Fox, D. G. Garnsey, J. C. Griffiths, John H. Griffith, George W. Hayes, Edwin Hillyer, H. H. Hobbs, E. A. Hough, John Howley, O. C. Kemp, Milo E. Lawrence, W. J. Littlejohn, E. A. Munson, H. A. Nolte, J. Peetrey, Rogers Porter, C. W. Potter, M. H. N. Raymond, W. A. Reed, J. Irving Riddle, W. F. Ross, H. M. Russell, T. H. Smith, A. W. Spalding, H. C. Stuart, D. S. Wagner, J. A. Weinland, Geo. A. S. Wilson, J. O. Wilson, T. J. Zollars.

The Insurance press was represented as follows:

*Insurance Age*, by Dr. Kempson; *Indicator*, by W. H. Burr; *Argus*, by C. E. Rollins; *Chronicle*, of New York, by Franklin Webster; *Monitor*, by C. C. Hine; *Investigator*, by J. S. Bloomington; *Weekly Underwriter*, of New York, by — —; *Spectator*, by C. M. Bishop; *Standard*, of Boston, by C. M. Ransom; *Western Insurance Review*, by H. L. Aldrich.

The *Chicago Tribune*, the *Chicago Times*, the *Chicago Inter-Ocean*, and the *Chicago Evening Journal* were also represented.

Reception of visitors and representatives of other Associations.

The President—

So far as the Chair is informed, there are no delegations here from sister Associations. Such a delegation is expected from the Southern Association, and when they arrive we will receive them. If there are any other delegations or representatives from other Associations, I would like to be informed when they arrive, so that we can interrupt our proceedings and welcome them to the courtesies of the floor.

#### REPORT OF THE EXECUTIVE COMMITTEE.

The Secretary read the report of the Executive Committee as follows:

Meeting of the Executive Committee of the Fire Underwriters' Association of the Northwest, at the office of the North British and Mercantile Insurance Co., Nos. 161 and 163 La Salle street, September 9th, 1884, at 8 o'clock P. M., President C. K. Drew in the chair.

The meeting was called to order by the President, and the following gentlemen were present: T. H. Smith, Milo E. Lawrence, W. A. Cormany, H. C. Stuart, M. J. Burns, C. W. Potter, H. H. Hobbs.

On motion, Mr. George W. Hayes was requested to represent Wisconsin, Mr. J. H. Warner being absent; and that Mr. George W. Adams should represent Ohio, Mr. Parsons being absent.

Mr. George W. Hayes, ex-Secretary and Treasurer, then submitted his report, as follows:

Receipts from annual dues,	\$1,175 00
Receipts from sale of Proceedings,	8 50
Total,	\$1,178 50
Balance due Treasurer last report,	\$ 99 48
Disbursements,	1,065 16
	\$1,164 64
Balance on hand,	13 86
	\$1,178 50

On motion of Mr. Adams the report was received.

Mr. Zollars then moved that the report of Mr. Hayes be referred to a committee of three for auditing.

It was so ordered, and the following gentlemen were appointed by the Chair as an auditing committee: Mr. T. J. Zollars, Mr. H. H. Hobbs and Mr. C. W. Potter.

On motion of Mr. C. W. Potter it was ordered that the Secretary be allowed \$200 for the year 1883.

Mr. T. H. Smith then moved that the Committee recommend to the

Association that visiting Local Agents and resident Local Agents be invited to a seat on the floor.

The motion was adopted.

Mr. Griffiths stated that he had one hundred complimentary tickets printed, subject to the use of the gentlemen who have friends they wish to invite to the meeting.

Mr. Potter suggested that the members should be notified not to give any of the complimentary tickets to members who are eligible but do not keep up their dues.

Mr. Griffiths stated that he had sent complimentary tickets to the city editors of the *Chicago Tribune*, *Chicago Times*, *Chicago Inter-Ocean* and *Chicago Evening Journal*.

The committee that was appointed to audit Mr. Hayes' account, then reported that they had audited it and found it correct.

On motion it was ordered that the report be received and the committee discharged.

The following names were then proposed for membership:

Brown, E. H.,	Kansas City, Mo.,	Special Agent,	Connecticut Fire Ins. Co.
Cherry, H. A.,	Des Moines, Ia.,	Special Agent,	Northern Assurance Co.
Culbertson, O. E.,	Tolono, Ill.,	State Agent,	Ætna Insurance Company.
Eddy, H. C.,	{ Chicago, Ill.,	} Resident Secret'y,	Commercial Union, London.
	{ 157, 159 La Salle St.		
French, Chas. L.,	Jacksonville, Ill.,	Special Agent,	Glens Falls Insurance Co.
Garnsey, Jas. H.,	Detroit, Mich.,	Special Agent,	Germania Fire, Cincinnati, O.
Garrique, R. H.,	Chicago, Ill.,	Ass't Manager,	Germania Fire, New York.
Gould, Geo. D.,	Chicago, Ill.,	Adjuster.	
Higgins, M. L.,	Fremont, Neb.,	Special Agent,	California Fire.
Jewett, W. H.,	Ypsilanti, Mich.,	Special Agent,	Hartford Fire.
Johnson, O. K.,	Chicago, Ill.,	Special Agent,	Continental, New York.
Nunn, J. A.,	Fort Madison, Ia.,	Special Agent,	Connecticut Fire Ins. Co.
Spencer, A. P.,	Kansas City, Mo.,	Special Agent,	Queen Ins. Co.

The President then stated that when the Executive Committee meeting adjourned, it would adjourn to meet at 9 o'clock Wednesday morning, at 204 Dearborn street.

On motion the meeting then adjourned.

The Secretary—

I will state that at the morning session of the Committee, the only business transacted was the election of these additional members.

Mr. W. F. Fox: I move its adoption.

The motion was carried.

The President—

A moment ago, under the head of "Reception of Visiting Friends," I mentioned the Association of the South. At that moment Mr. Cornell placed in my hand a letter from the President of that Association, Mr. Lyman. It would, perhaps, be in order to read it now, as it expresses his regret at his inability to be here this morning.



The Secretary then read the letter as follows :

NEW ORLEANS, SEPT. 6, 1884.

CYRUS K. DREW, Esq., *President of the Fire Underwriters' Association of the Northwest, Chicago, Ill.*

DEAR SIR : It is with extreme regret I find, as the time approaches for your meeting, that it will be impossible for me to get away from my post of duty.

Aside from the great pleasure of listening to the able debates and papers of your session, I shall miss much the kindly greetings and pleasant social interchanges with your members, to all of which I have been looking forward since receipt of your kind invitation with much expectation of pleasure.

I have written Vice-President Thomas, requesting him, if possible, to represent our Association on your floor, and hope that if he can't get away there will be some members of our body on the floor to answer for us.

Please accept for yourself and fellow officers, and convey to the members generally of your Association, the heartiest and warmest expressions of good will and fraternity from the Association of the South.

Assure them of our great gratification at having such a delegation from their body as attended our late meeting at Louisville, and say also, that as a body we shall ever be found ready and willing to join the Association of the Northwest in any movement calculated to further the interests of sound underwriting and correct practices in our profession.

Again expressing my personal regrets, with great respect,

Very truly,

W. R. LYMAN,

*President Association of the South.*

The President—

I am certain that every member of our Association who is acquainted with this genial gentleman, will regret he is not with us. I know that he fully expected to come.

#### REPORT OF THE SECRETARY.

The Secretary—

The Proceedings of the Fourteenth Annual Meeting having been printed and distributed by Mr. George W. Hayes, ex-Secretary and Treasurer, and his financial report having been approved by the Executive Committee at the session last evening, there is nothing for me to do but to give you a synopsis of the financial condition of our Association, which I have just read to you in the report of the Executive Committee. Mr. Hayes informs me that this is a very satisfactory showing, and the first time in some years that the Association has started the new year with a balance on hand. The

membership up to last evening numbered 280, and we admitted at our evening session eight, and at our morning session six, making a total membership of 294. I wish to further state that quite a few names have been erased from the membership list from the fact of their declining to pay their annual dues, but any names that were omitted we shall be pleased to re-instate upon the payment of their last year's dues.

On motion the report of the Secretary and Treasurer was adopted.

## REPORT OF THE LIBRARIAN.

Mr. R. M. Buckman, Librarian and Custodian, submitted the following report :

CHICAGO, September 10, 1884.

R. M. BUCKMAN, *Librarian and Custodian, in account with* LIBRARY FUND OF THE FIRE UNDERWRITERS' ASSOCIATION OF THE NORTHWEST.

## RECEIPTS.

August, 1882.	J. M. De Camp, "Gift,"	-	-	-	-	\$250 00
April 7, 1884.	Received sale of copy Proceedings,	-	-	-	-	2 00
	Total receipts,	-	-	-	-	\$252 00

## EXPENDITURES.

1883.						
Sept. 5.	Paid Callaghan & Co., law books, per bill on file,	-	-	-	-	\$74 25
May 23.	Paid Barker 2 volumes Phillips, per bill on file,	-	-	-	-	7 00
Oct. 19.	Paid Sammons, Clark & Co., framing picture, per bill on file,	-	-	-	-	4 45
1884.						
Feb. 11.	Paid Callaghan & Co., law books, per bill on file,	-	-	-	-	56 50
May 12.	Paid Callaghan & Co., law books,	-	-	-	-	2 50
June 15.	Paid express,	-	-	-	-	85
Sept. 9.	Paid Sammons, Clark & Co., framing picture,	-	-	-	-	11 45
	Total expenditures,	-	-	-	-	\$157 00
	Cash on hand,	-	-	-	-	\$ 95 00

Audited and approved Sept. 9, 1884.

R. J. SMITH, }  
J. O. WILSON, } *Library Committee.*

## LAW.

Charter and Act of Incorporation, Sept. 12, - - -	1881
Adjustments..... Waters, A. J., - - -	1879
Adjustments, hand- } Griswold, J., - - -	1882
book of.....	
Agency, "Evans on," Ewall, M. D., - - -	1879
Arbitration and Award, Morse, Jno. T., - - -	1872
Digests.....	Bates, C., - - - 1873
	Clement, G. A., (supplement), - 1882
	Hine & Nichols, - - - 1882
	Sansum, O. B., - - - 1876
Exposures.....	Ross, W. F., - - - 1874
Fixtures.....	Ewall, M. D., - - - 1876
	Hill, J. W., 2d edition, - - - 1871
	Tyler, R. H., - - - 1877
	Angell, Jos. K., 2d edition, L. & F., - 1855
Insurance.....	Annesley, Alex., L. & F., - 1808
	Bunyan, C. J., L., - - - 1854
	Ellis, Chas. (W. G. Shaw's Notes), - 1854
	Emerigon, Balt. M., from French by
	D. Meredith, - - - 1850
	Hammond, E., - - - 1840
	Hine, C. C. (Blue Book), - 1875
	Hughes, David, - - - 1828
	Marshall, S., Arr. by J. W. Condy, 2
	vols. - - - 1810
Law Dictionary.....	Park, Jas. A., - - - 1789
	Weskett, Jno., - - - 1781
	Bouviers, Jno., vol. 1, A-Itin; vol. 2,
	Jac-Zol, - - - 1883
Principles and Prac- } Arr. by Jos. M. Rogers, 3d edition, -	1875
tice of Fire Insur- }	
ance .....	
Reports—(cases) .....	Bennett, E. H., vol. 1 (1839), 2
	(1848), 3 (1851), 4 (1864), 5 (1875).
	Law Journal, vols. 1, 3, 5, 11.
Subrogation.....	Sheldon, H. N., - - - 1882
Warranty in Fire In- } Fox, F. F., - - -	1883
surance.....	

## STATE INSURANCE REPORTS.

State.	No.	Date.	Part.	
Connecticut .....	17	1882	1	Bound.
Illinois.....	4	1872	1	Unbound.
	6	1874	1 & 2	Bound.
	9	1877	1	Unbound.
	13	1881	1	Unbound.
	14	1882	1	Unbound.
Iowa.....	15	1883	1	Unbound.
	9	1878	1	Unbound.
	14	1883	1	Unbound.
Kansas.....	1	1871	1 & 2	} Bound in 1 vol.
	2	1872	1 & 2	
	3	1873	1 & 2	
	3	1873	1 & 2	Unbound.
	5	1875	1 & 2	Unbound.
Kentucky .....	9	1879	1	Bound.
	12	1882	1	Bound.
	12	1882	1 & 2	Bound.
Michigan.....	6	1876	1	Bound.
	10	1880	1	Bound.
	11	1881	1	Bound.
Minnesota.....	2	1873	1	Unbound.
	5	1876	1	Unbound.
	10	1881	1	Unbound.
Missouri.....	12	1881	1	Unbound.
	13	1882	1	Unbound.
	9	1868	1 & 2	Bound.
New York.....	10	1869	1 & 2	Bound.
	13	1872	1 & 2	Bound.
	14	1873	1 & 2	Bound.
	20	1879	1 & 2	Bound.
	22	1881	1	Bound.
Ohio.....	2	1869	1 & 2	Bound.
	3	1870	1 & 2	Bound.
	6	1873	1 & 2	Bound.
	10	1877	1 & 2	Bound.
	12	1879	1	Unbound.
Pennsylvania.....	13	1880	1	Unbound.
	13	1880	1 & 2	Bound.
	15	1882	1	Unbound.
	16	1883	1	Unbound.
Wisconsin.....	10	1882	1	Bound.
	12	1881	1 & 2	Bound.

## PERIODICALS.

## BOUND.

*Argus*—Edited by D. Beveridge, Nov., 1882.

*Argus*—Vol. 7 (1877), 8 (1878), 9 (1879), 10–13 (1880–'81), 14, 15 (1882).

*Critic*—Vol. 6 (1878), 7 (1879), 8 (1880), 9 (1881).

*Investigator*—Vols. 4–5 (1875–'76), 6 (1877), 7 (1878), 8 (1879), 9 (1880), 10 (1881).

*Monitor*—Vol. 15 (1867), 16 (1868) 2 copies, 17 (1869), 18 (1870) 2 copies, 20 (1872), 21 (1873).

*Spectator*—Vol. 6 (1871), 7 (1872), 8 (1873), 9 (1874).

*Times*—Vol. 2 (1869), 3 (1870).

*Underwriter*—Vol. 2 (1870).

## MISCELLANEOUS.

Insurance Year Book, *Spectator Co.*, 1882.

Insurance Year Book, *Spectator Co.*, 1883.

Knowledge-Box, *Investigator Co.*, 1880.

Tables—Cancellation, J. Griswold.

Illustrations on Isometrical Drawing, by C. C. Hine.

## REGISTERS.

New York Underwriters and General Joint Stock, vol. 13, 1869.

American Classification of Fire Risks, Barton & Arnold, 1870.

Expiration, P. Roberts, 1881.

## REPORTS.

Chicago Board of Trade, No. 21, 1879.

Ohio State Board of Underwriters, 1875.

R. M. BUCKMAN, *Librarian*.

Mr. Geo. W. Hayes: I move that the report be received.

The motion was carried.

Mr. Peetrey—

When will it be in order to elect the members recommended by the Executive Committee?

The President: At any time. It is in order now.

Mr. Peetrey—

I move, then, that we proceed to the election of the members as proposed by the Executive Committee.

The motion was carried.

The Secretary then read the names referred to.

The President—

Your motion is that they be admitted as members?

Mr. Peetrey: Yes, sir.

The motion was carried.

PRESIDENT'S ADDRESS.

The Vice-President, Mr. T. J. Zollars, was called to the chair, and the President read his Annual Address as follows:

GENTLEMEN OF THE FIRE UNDERWRITERS' ASSOCIATION OF THE NORTHWEST:

It affords me great pleasure to greet you to-day, upon this, the fifteenth annual meeting of our organization. We are assembled under favorable auspices. So far as I am informed, death has not invaded our ranks but once since last we met, and but one memorial page will lend its sombre shade to the Proceedings of 1884. For this merciful exemption we should be devoutly thankful to Him in whose hands our breath is, and whose are all our ways. So it is, that almost an unbroken brotherhood, we are come up to this Mecca of insurance, to survey the field of our labors; to learn wisdom, it may be, from the mistakes and misfortunes of the past, and gird ourselves anew for the trials of an unknown future.

So far as the organization of Boards and co-operation of companies is concerned, it would seem as if "the winter of our discontent" had passed away. We have now but to address ourselves to the solution of practical questions connected with the successful prosecution of the business. Having learned wisdom in the expensive school of experience, the companies seem willing, by correct practice and faithful adherence to rates, to realize a more substantial return for insurance capital. If the progress of this Association is an index of the growth of the business in the United States, then, indeed, may we look back with astonishment at the results achieved in the last decade. A modest bedroom in the Phillips House, at Dayton, sufficed to hold the small company first assembled. We met to lay the foundation of what has since become the powerful Association of the Northwest. With doubt and hesitation a handful of Special Agents began the work. They deprecated any attempt or desire to dictate to their superiors, seeking only to lift up a standard around which all who belonged to the special field force of the great army of Underwriters might rally, to advance by every honorable means the best interests of the profession. That little band builded better than they knew. It may truthfully be said that whatever success has attended this Association is attributable to a faithful adherence to the principles enunciated at Dayton. Without any attempt to dictate the policy of officers or Managers, with malice toward none and charity for all, you have pursued the even tenor of your way, confining

your discussions and papers to topics of interest to the whole profession. By this sign you have conquered, until the Underwriters' Association of the Northwest has become — what it is; until, as our late President well said, we have an Association “giving us breadth of charity and culture, begetting confidence, stimulating inquiry, fostering professional pride, and suggesting trains of thought and aspirations leading to reform and higher attainments in scientific and technical knowledge.”

#### OUR PROGRAMME.

The Programme before you to-day indicates a rich and meaty feast. Our thanks are due to the gentlemen who have so cheerfully responded to the call of your President, lending their pens and voices to the interest of this occasion. Having been enabled through their courtesy to provide so interesting an entertainment, I shall not detain you with an extended address. The previous Presidential addresses have been of such a high order as to be positively discouraging to the successor to the long line of able men who have occupied this position. Brevity is said to be the soul of wit. It is a quality commending itself to the Association at this hour. So let my address be the brief preface to the full and interesting volume we are to enjoy during our two days' session.

#### NOTHING NEW.

High authority declares that there is nothing new under the sun. Certainly, there is nothing new to be said—at least by your President—upon the subject of fire insurance. Every field has been carefully gleaned. We can but follow the reapers, and learn, it may be, lessons of wisdom from what has been so ably and frequently said in bygone days. To write anything unwritten, or say anything unsaid, is a task which might well tax the ingenuity of the most skilled and learned in the profession. Besides, as Voltaire says, “the multiplicity of facts and writings is become so great, that everything now must be reduced to extracts.” But, while there is nothing new to be said, yet by line upon line, precept upon precept, here a little and there a little, we may carry from these meetings seeds of thought which may produce a harvest in the days to come.

#### PREVENTION BETTER THAN CURE.

It seems to me, gentlemen, that the most important subject that can engage our attention at this time, is the prevention and extinguishment of fires. This, indeed, is the burning issue of the hour. In vain are rates advanced, risks carefully surveyed, adjustments closely made, if attention is not given to the prevention of fires, the prolific source of all our woes. Instead of taking it for granted that the ratio of losses incurred to premiums received must necessarily approximate sixty per cent., would it not be the part of wisdom to devise and execute a scheme by which fires may be prevented, or limited in number and severity? Instead of giving so

much attention to water supply, engines, fire ordinances and building laws, would it not be well to divert a tithe of the millions spent for the protection against fires—to the prevention of fires? In this case, is not an ounce of prevention worth a ton of cure? What, then, is the practical remedy? Local Boards should be requested to urge upon municipal authorities the enactment of ordinances creating the offices of Fire Wardens. Appointed for a term of years, they should have police jurisdiction. Every part of their districts should be thoroughly and frequently visited, and every dwelling, store, factory, and mill carefully examined. The defective flue, the over-heated furnace, the convenient ash-barrel, and the unnumbered other incendiaries lying in wait to destroy property and lives upon every block of every city in the land, should be abolished and the offending owners summarily dealt with. Special hazards should receive special attention. Greasy rags, neglected waste, untidy floors, and improperly constructed boiler houses, should be watched day by day. After all, carelessness, and oftentimes, criminal carelessness, lies at the foundation of this fiery waste. American life is gauged at a high pressure. We live too fast. The insane desire to become suddenly rich, which permeates the body politic, fosters carelessness. The free and easy custom of the times, affording to every merchant and manufacturer indemnity against loss by fire to the extent of one hundred cents on the dollar, invites that carelessness as to details, the results of which are read on every page of the daily press. Business men, having procured their utmost limit of insurance, become at once indifferent to the causes or extinguishment of fires. Man is a selfish animal, not given to anxiety as to the welfare of his fellows, provided his own safety and happiness are undisturbed. So the companies, with their too generous policies, scattered broadcast over the land, not only undertake the Herculean task of restoring what the flames destroy, but whether consciously or not, offer a standing reward for the commission of the crime of arson.

#### THE EXTINGUISHMENT OF FIRES.

Next in importance to the prevention of fires, is their early extinguishment. "Behold how great a matter a little fire kindleth." The wasted millions in this city in 1871 emphasize the inspired text. May we not profitably study means by which little fires may be kept from becoming wide-spread conflagrations? "The little foxes destroy the vines." However true this may be in morals, it is equally true that underwriters could have a tolerably thrifty vineyard if the foxes would remain "little," and not become ravening wolves. A recent article in the *Investigator* suggests very wisely that we give the fire bucket a chance. Is it not possible that, in our anxiety to perfect fire departments and introduce elaborate systems of water supply, we have slighted the modest bucket, which, if filled, and in the right place at the right time, in willing hands, might extinguish a fire which shortly afterwards defies the skill and courage of the best



department in the world? The fire bucket is to the department what a musket is to the army. A corps equipped entirely with cannon would be an imperfect and easily defeated organization. And so a fire department, with nothing but steamers, or the uncertain and treacherous Holly System, is equally faulty. Ofttimes the entire cost of the department is destroyed in one fire—cost which might have been saved, if the too tardy engines had not been implicitly relied upon. Why is it not practicable to organize in every ward of every city, and in every town and village in the land, bucket brigades composed of citizens who could thus protect each other? Germany is full of such organizations, and they accomplish the purposes for which they were designed. They are inexpensive, efficient, and should be universal.

#### THE THREE-QUARTER CLAUSE.

The familiar themes of the three-quarter and co-insurance clauses will be discussed in your hearing. Whatever may be our personal views upon these kindred topics, we listen with delight to whatever may be said calculated to throw light upon the vexed question. The blazing fires of the last six months would seem to have thrown such a lurid light upon it that we might plainly see to read the important lesson of the hour. Our esteemed friend of the *Monitor* will attempt to tell us "What the Matter is with the Business." If he answers the conundrum satisfactorily, I am assured you will not have come hither without royal compensation. Were I attempting a solution of the problem, I should say that in vain do the companies keep all the commandments from their youth up. To each may be added: "One thing thou lackest." It is to construct and issue such an insurance contract *as will render the use of the torch unprofitable*. Upon this commandment hang all the law and the profits.

It goes without saying, that a system of insurance which fully indemnifies the assured is radically defective. And if the moral hazard in this country was as great as some companies pretend it to be, the end of fire underwriting would be near at hand. Division of the loss between the company and the assured seems essential to success. This, indeed, is the theory of the business, but not the practice. Hence, incendiary fires, kindled by the dishonest, and those other fires caused by criminal carelessness begotten by the practice of the companies themselves. Without attempting a solution of the difficulty, I will venture to say that when policies are so written, that in case of fire a portion of the loss inevitably falls upon the assured, then and not till then will you be in sight of the Promised Land. As it is now, the Adjusters are the only protection the companies have. Were it not for their close settlements, ofttimes bringing undeserved discredit upon the business and the anathemas of the assured upon themselves in their attempt to make salvage, the companies would be burned up as well as their hapless patrons.

The French law, which deprives of indemnity the person on whose

premises a fire originates, would hardly do for Americans; but it would seem just that the law should provide that no person upon whose premises a fire originates, if said premises are in a town or city, shall recover more than one-half of the value of his insurance, *provided* any contiguous building shall be burned by reason of said fire.

## STATE AND LOCAL BOARDS.

It is a cause for most hearty congratulation that State and Local Boards are so universally in operation in the Northwest. The days of the rate-cutter seem to be numbered. In many cities the Compact System has been adopted, meeting the highest expectations of its friends. Blessed be the man who invented it! Let him be knighted. Each year will demonstrate its value. The Managers will become more familiar with their duties, and the insuring public will gradually learn that well-constructed buildings receive and deserve a low rate, while a higher rate awaits the risk falling below the standard. No one familiar with the Compact System would consent to its abolition. By it, inadequate rates may be raised or old rates restored; unruly and disloyal agents disciplined; loose and undesirable forms of policies avoided; good practice inaugurated and maintained, and the business raised from the Slough of Despond, into which in many places it has fallen, to the dignity of other pursuits in life. Competition is so fierce and sharp in this Western world that the Local Board, unblessed with a Manager, is almost powerless to advance rates. The conscientious agent—and there are such agents—endeavoring to carry out the instructions of his Manager in advancing a rate, is not only outvoted by his colleagues, but betrayed to the assured at the earliest practicable moment. Attempting to discharge his duty, he is robbed of his too meagre income, and learns the sad lesson, that the straight and narrow way leads to Impecuniosity. It may be urged against the Compact System that it enables inexperienced persons to enter the ranks and compete at once with those who have given years of study and service to the business. This, however, cannot count for much, in the face of the stubborn fact that companies themselves ignore experience. This is true, and pity 'tis 'tis true. It is an unpalatable fact that in many places the insurance agent outranks but little the book agent and the hero of the lightning rod. Companies too often select as representatives merchants void of custom and credit, preachers without hearers, reduced by misfortune to bronchitis, rubbers and insurance; dubious doctors, decayed gentlemen, and a like miscellany of unfortunates, who seem to say: "Pity our sorrows and purchase a policy." These "knights of the sorrowful countenance" have done much by their necessities, their misinformation and their heroic espousal of the assured's side of the controversy, to debauch the business and lodge it deep in the public distrust.

For Local Agents as a class I entertain a most profound respect. Being

one of them I sympathize with them in their trials, and mingle my tears with theirs that the bloated companies do not allow thirty per cent. commission rather than fifteen. Yet I have often wondered at the mysterious Providence that permits many Local Boards to be afflicted with one or more members, either grossly incompetent or damnably vicious—or both. This is one of the things to be revealed in the bye-and-bye. To the chronic rate-cutter, begotten in the palmy days of the National Board and reproduced each year of Grace since, the Manager under the Compact system is a terror. Baffled in his attempt to procure business by violating the tariff, he can only divide his scanty commission with the assured—a practice to be encouraged, for thereby his unwholesome career is the sooner terminated, and the road over the hill to the poor house more quickly traversed. I am glad that our programme contemplates “Tidings from the Managers,” and I doubt not they will be tidings of joy to all who earnestly desire the establishment of correct practice and maintenance of adequate rates.

#### LEGISLATION.

Much has been written about the hostile legislatures. Some of them treat insurance companies as public enemies. Life is too short to attempt the education of the hay-seed legislator, who, fresh from his rural constituency, seeks political immortality by attacking monopolies. These, to his fevered imagination, consist of insurance and railroad companies. The latter generally manage to subdue opposition by a generous distribution of passes. The average legislator, with an annual pass in his pocket over every railway in the State, becomes at once oblivious to the extortions to which he had called attention in stentorian voice from every hustings. So far, the railway companies have the advantage of us, but the insurance companies have the matter of rates in their own hands, and should advance them to meet the unwarranted exactions of State Legislatures. If these choose to levy tribute upon insurance companies for doing business in their respective States, let the tax be laid upon the citizens thereof, with a handsome margin for expenses and contingencies. Instead of spending breath or money in fruitless attempt to educate these half-baked legislators, let us permit them to work their own sweet wills, leaving their dear constituents to foot the bills. This would be poetic justice allied to common sense.

#### THE SOUTHERN ASSOCIATION.

On the 21st of May, with other members of this Association, I had the honor of representing you at the meeting of the Southern Association of Fire Underwriters, at Louisville. The session, extending through two days, was entertaining and instructive. The papers and the speeches indicated an intelligent and enthusiastic interest in the various topics before the Convention. Our Southern brethren have the happy faculty of thinking upon their legs, and every discussion proposed to the Association

found ready and willing participants. As for their hospitality, it was worthy of the State and people, whose crowning excellence has ever been a whole-souled entertainment of their friends. Here, too, your representatives learned for the first time that a feast, comprising every delicacy of the season, with rare vintages of every clime, including the seductive sour-mash, native and to the manner born, lasting from high noon until the going down of the sun, was, in the language of the Sunny South—a lunch. By whatever name it might be called, it was to the last degree elegant and enjoyable. It was good to be there, and your delegates drank to the health of their absent comrades of the Association of the Northwest.

## SPONTANEOUS COMBUSTION.

I congratulate you upon having at this meeting Professor John M. Ordway, of the School of Technology, of Boston, who will lecture this evening upon spontaneous combustion. This is a subject of deep interest to underwriters. Its importance has been burned into them. There is little doubt but that many fires, for which no apparent cause could be assigned, have arisen from spontaneous combustion. Among the principal causes of fires, as shown in the reliable *Chronicle* Tables for 1883, two hundred and eight are attributed to spontaneous combustion, while sixteen hundred and ninety-four are classed as incendiary, and one hundred and twelve as caused by carelessness. If we had any means of determining this matter, I believe it would be found that many fires, said to have been caused by carelessness, were attributable to spontaneous combustion. However this may be, the old witticism of Adjusters remains true, that many fires are occasioned by friction—rubbing a thousand dollar policy against a five hundred dollar building.

## RATES ON DWELLINGS AND CONTENTS.

At the meeting of the Association at Detroit in 1872, I had the honor to write the report for the Committee on Rates. Lapse of years has confirmed the wisdom of the suggestions made in that report at that time. They referred to the rates on dwellings and their contents. It was held then, by that committee, that dwellings and contents having an insurable value of less than five hundred dollars, should pay an extra rate over and above whatever local tariff was in force, as should dwellings and contents having an insurable value of over ten thousand dollars. The reasons are obvious, but apply with greater force to the latter class. Expensively constructed dwellings are generally insured for about one-half their value, and if detached, at nominal rates. In some cities, it is said, the policies are given away and a chromo thrown in. When a fire occurs, the result is too well known. A zealous pipeman will destroy more than the fire itself, so that between the two calamities of fire and water, the companies generally pay a total loss under their policies, occurring, perhaps, in only one room of the luxurious mansion. On these two classes of dwellings, the poorly

constructed and ill-furnished, and the palatial residences of our merchant princes, there should be exacted an extra rate, certainly not less than thirty-three per cent. As for term policies themselves, what a blessed thing it would be if they could be abolished. This, however, is too much to hope for, but companies may well take heed to the note of warning sounded by Mr. Heald in his address to the National Board in May last, wherein he describes most forcibly the day of reckoning awaiting companies loaded down with liabilities on term policies written at inadequate rates. In the sweet bye-and-bye these will prove to many ambitious corporations the last straw, destined, not to break the camel's back, but the underwriters', who in their greed to collect premiums for to-day, forget the losses surely coming through the long to-morrows.

## OBITUARY.

We have lost only one member by death since our last meeting. CHARLES F. C. COOMBE, Special Agent of the British America Assurance Co., of Toronto, died at St. Louis, July 14, 1884, aged twenty-seven years. At the age of seventeen he entered the insurance business, and at the time of his death, ten years thereafter, was the trusted Special Agent of one of our leading companies, having had committed to his care a field embracing five important States. He gave to his employers conscientious and intelligent service. What his hands found to do, he did with his might, and he did it well. Though called at so early an age to face the unknown realities of another life, he knew in whom he had believed and went down into the dark river, sustained by an unfaltering trust in a Divine Redeemer. Doubtless, on the other shore angel hands welcomed him. Having been faithful over a few things here, he received his reward and entered into the joy of his Lord. No higher eulogy can be pronounced upon a man than can be truthfully said over the new-made grave of young Coombe—those who knew him best, loved him most.

"Death takes us by surprise,  
And stays our hurrying feet;  
The great design unfinished lies—  
Our lives are incomplete.

But in the dark unknown,  
Perfect their circles seem,  
Just as the bridge's arch of stone  
Seems rounded in the stream."

Another, who was one of the early members of the Association, widely known and universally respected, but whose duties and infirmities prevented his meeting with us for several years past, a few months since joined the majority. As a personal friend I desire to lay this last tribute of affection and respect upon the grave of MERVIN F. COLLIER, State Agent for Indiana, of the Germania Insurance Company of New York. For fifteen years I knew him, and I knew him well. He brought

to the performance of every duty in his profession a high order of intelligence; a vast fund of useful information, gleaned through laborious years in the field of experience; a conscientious regard for the right, as he understood it; and an indomitable zeal which never flagged throughout his busy and useful life. His mission upon earth seemed to be, to spend and be spent in the service of his employers. Oblivious of fatigue, oft-times in weakness and weariness, he went up and down the State of Indiana, intent only upon serving to the best of his ability, the company whose important interests were committed to his care. He had his faults, and he had his enemies; who has not? But he had a host of friends, bound to him by hooks of steel, whose unselfish love he prized above every earthly possession. In his manly bosom there beat a heart of tenderest sympathy for the oppressed and sorrowful of earth's children. He understood and appreciated

"The joys of friendship—  
The trust, security and mutual tenderness,  
The double joys, when both are glad for both."

Faithful in the discharge of every obligation, diligent in business, fervent in spirit, given to hospitality, a lover of his fellows, he entered into rest. For

"There is no Death; what seems so is transition;  
This life of mortal breath  
Is but a suburb of the life elysian,  
Whose portal we called Death."

Steadfast friend! Hail and farewell!

#### CONCLUSION.

Finally, gentlemen, permit me to remind you that your calling is one of the most responsible and honorable among the pursuits of life. Insurance is the handmaiden of commerce and manufactures. Capital will not trust itself where it cannot be protected by the broad shield of its indemnity. The business of fire insurance has grown to gigantic proportions within the memory of the youngest of us, but it is destined to expand with ever-increasing ratio, until the Union of the States shall be densely peopled from ocean to ocean by the representatives of every clime and nation beneath the shining sun. Westward the Star of Empire takes its way, and following close upon its shining path are found the great insurance companies of the world, offering their protection to the emigrant in his humble home, as well as to the manufacturer and artisan seeking to develop the resources of this wonderland. Untried questions will meet you every hour. New industries—and their name is legion—starting up on every hand, involve unknown hazards, while every loss presents some feature heretofore a stranger to the most experienced Adjuster of the profession. To succeed, requires the highest order of intelligence, closely allied to sterling integrity and untiring industry. Gentlemen, you must

necessarily be learners until the end. The knowledge acquired yesterday will not meet the requirements of to-day, and will be obsolete to-morrow. The stout heart and willing hand can alone win the prize. So live and act in all your relations to your companies, your patrons and your associates, as not only to win success, but what is more, to deserve it.

Mr. J. M. De Camp—

MR. PRESIDENT: You certainly are to be congratulated on this large attendance at the opening session. I left Cincinnati with some misgivings that there would be a large attendance, owing to the extreme sultriness of the weather, and from the other fact that we were all busy with unprecedented and heavy losses. But it does seem as if the interest in the Northwestern Association were perennial. Whether it is the drouth or the devil, the country is burning up, and it does not follow that those who are here have no losses in the field awaiting them. I have prided myself for the last four years, in writing to my agents when they reported a loss, that it would receive immediate attention, or that a Special would be there next week. I now change the phraseology and say it will have attention sometime during September, or this fall. I think, Mr. President, that the Association is to be congratulated on your rich, admirable and practical address, and I can say of the President, in the language of the hymn:

“He drew us, and we followed on,  
Charmed to confess the voice divine.”

I wish to move a reference to appropriate committees of three or four of the topics of your address in order to expedite business, not naming a general committee, but would move that you appoint, at your leisure, a committee of three on the death of Charles F. C. Coombe; a second committee of three on the subject of the prevention of fires; a third committee of three on the Three-quarter clause; a fourth committee of three on State and Local Boards; and a fifth committee of three on Rates on Dwellings and Contents. I move you, sir, that those committees be appointed.

The motion was carried.

The President: I will announce the committees after recess.

Mr. I. S. Blackwelder—

I would like to offer as a separate motion, or as an addition to the motion of Mr. De Camp, that a committee, also of three, be named to prepare resolutions on the death of Mr. M. F. Collier. Although he was not a member of this Association, I believe, at the time of his death, he was an old and honored member in the early days. We have reports in our Proceedings which were written by Mr. Collier when he was a member,

and I trust that a committee will be appointed to take action in respect to his death. I therefore offer that as a motion.

The motion was seconded by Mr. George W. Hayes, and was carried.

Mr. D. S. Wagner—

The Mutual Underwriters of the Northwest, through Mr. Montgomery, the Secretary of the Western Manufacturers' Mutual Insurance Company, have expressed to me a desire to listen this evening to the address of Professor Ordway, and if it is in accordance with the wishes of this Association, I would move that they be admitted to listen to that address.

Mr. T. H. Smith—

I would ask if they are not eligible to membership here, and cannot hear the address upon the same terms that the rest of us can? If I understand our Constitution, they are competent to be elected members here, if they so desire. Am I correct in that?

The President—

I presume they have State jurisdiction, as Special Agents. I don't know the facts in the case.

Mr. Smith—

If they are, I would suggest that they hear the lecture in the same way that the rest of us do.

The President—

The Chair did not hear any second to the motion. I will announce the committees later. We will now entertain any motion, any matters of unfinished business, or any miscellaneous matters which may come before us.

Mr. I. S. Blackwelder—

It strikes me that we ought to extend an invitation to the underwriters of the city, whether Local or Special Agents, or whatever character or position they hold, to attend this meeting this evening. We have room here for a large audience, and I think a good many of the Local Agents who are residing and visiting in the city at this time, would be glad to be present, if they felt that they would be welcome. I have no doubt that the Association would be glad to extend a welcome to all that the hall will accommodate. I would not like to offer a motion, because I suppose likely the Executive Committee have had this matter before them, and have possibly taken action upon it. I only call it up in order that it may receive attention at this time, whether or not such an invitation shall be extended.



The President—

I will state for the information of the Association that Local Agents, resident and visiting, may be admitted to the floor of the Association by procuring a card from some of the members. If there are any such gentlemen that you wish to invite, you can procure the cards from the gentlemen at the door.

Mr. W. J. Littlejohn, of Missouri—

I did not hear the motion made by Mr. Wagner. I would like to know what it was.

The President—

His motion was not seconded and it never came before the body.

Mr. Littlejohn—

The reason I ask it is that I was going to make another motion that they be invited, if it was a body of underwriters. We have plenty of seats here, and I do not see any necessity of our excluding them. We have heretofore always admitted any bodies of underwriters that happened to be in the city. I did not know what the motion alluded to.

The President—

Perhaps it is not in order to discuss it now, but the Chair understood a gentleman to say that the gentlemen were officers of mutual companies. Was that the fact?

Mr. Wagner—

Yes, sir, that is the fact. I would like to say, if you will allow me a moment, that these gentlemen are, no doubt, eligible to membership. While we sometimes are very jealous of them on account of their taking some of our better class of hazards from us, I feel for myself that there are no underwriters that are doing any more to better the condition of special hazards in the Northwest than they are, and while I am working in opposition to them, as you might say, yet I would be glad to have them join with us in anything that can be for the betterment of risks, and I would be perfectly willing to give them seats on this floor to listen to anything that would be of information or use to them as well as to ourselves. That is why I offered the resolution.

Mr. H. H. Hobbs, of Illinois: I will second Mr. Wagner's motion.

Mr. Blackwelder: That motion was not in order.

The President—

The motion has just now been seconded. Will you please state your motion definitely.

Mr. Wagner—

It is a meeting the same as ours. It is a meeting of the Mutual Insurance Companies of the Northwest, being held at the Grand Pacific to-day. It is a meeting of mutual companies instead of stock companies, but it is a regular annual meeting of all Mutual Companies of the Northwest, and the officers of those companies would like to listen to Professor Ordway's address, if they could do so without encroaching upon this Association.

Mr. J. M. De Camp—

I hope it will pass, because it is a courtesy that we can well afford to extend. I certainly would be opposed to having them attend our deliberations here in general, or perhaps to inviting them to become members. But this is a popular discourse, and they will be interested in it, and without any derogation of our privileges and rights and powers, we certainly can well afford to extend this fraternal courtesy. I should like to see it adopted, in that sense, for to-night only.

Mr. T. H. Smith—

If I am wrong, I can very easily be corrected. As I understand the provisions of the two Associations, they are entirely different. There is a close communion Mutual Association, with which we have nothing to do, and to which they do not invite us. Ours, as I understand it, is not. I understand that any man representing one of those mutual companies is perfectly eligible to membership, and I know that quite a number of them are members. Mr. Roper, of one of those mutual companies, was a member of our Association two years ago, for you will remember when Professor Tobin was delivering his lecture, he brought in something that he wished him to experiment upon. Now, the position I would take and what I propose, is this, that if those gentlemen wish to attend our meetings they can come in as members, full-fledged.

Mr. W. F. Ross, of Iowa—

The chiefs of the fire departments of the country are now in session at the Grand Pacific Hotel. If there are any persons we would like to have hear that lecture, it would be the chiefs of the fire departments, and I would therefore move to amend the motion before the house so as to make it include the chiefs of fire departments who are now in session at the Grand Pacific Hotel.

The President—

I will state, for the information of the gentleman and of the Association, that the chiefs of the fire departments have been invited to participate in all our proceedings. Our letter of invitation was read before them this morning and referred to a committee, and a gentleman was here and

said that they would avail themselves of the invitation and visit us, and would also extend an invitation to us, which would perhaps be handed in this afternoon, to go to some tests of the fire department, or something which would be more fully explained in their letter to us. The gentlemen have been invited, and a number of them are coming to-night, so that it need not interfere with the other motion.

The motion of Mr. Wagner was then carried.

The President—

Before I call for anything else, I will read some letters which I have received.

ALBANY, N. Y., Sept. 5, 1884.

J. C. GRIFFITHS, Esq., *Secretary of the Fire Underwriters' Association of the Northwest.*

DEAR SIR: I regret extremely that I cannot attend the Fifteenth Annual Meeting of the Association, to be held in Chicago, notice of which you kindly sent me. It so happens that September is full of association meetings in this State, and my first duty is here. With best wishes that yours may be a pleasant and profitable success, I am, yours very truly,

HENRY A. GLASSFORD.

COMMERCE INSURANCE COMPANY, }  
ALBANY, N. Y., August 19, 1884. }

J. C. GRIFFITHS, Esq., *Secretary of the Fire Underwriters' Association of the Northwest.*

DEAR SIR: The very recent death of my father, the President of this Company, so affected my business affairs that I cannot get away from home next month, and therefore shall not attend the meeting of our Association on 10th of September, which is a disappointment to me.

Yours respectfully,

G. H. VAN ALLEN,  
*Vice President.*

MIDDLEBURG, IND., Sept. 10, 1884.

C. K. DREW, Esq., *President of the Fire Underwriters' Association of the Northwest.*

DEAR SIR: Regret pressing engagements prevent our attending the Association meeting. Hope you will have a successful and enjoyable session.

W. H. SEIDERS.  
L. D. MOODY.  
BENJ. KELSEY.

LOCKPORT, N. Y., Sept. 9, 1884.

J. C. GRIFFITHS, Esq., *Secretary of the Fire Underwriters' Association of the Northwest, Grand Pacific Hotel.*

DEAR SIR: Am detained on law suit. Cannot be in Chicago tomorrow.

GEO. W. HALL.

The President—

I was in hopes that we would be honored with the presence of Mr. Cornelius Walford, to whom I extended an invitation, which he found upon his arrival in this country, inviting him to be with us to-day. Yesterday I received a letter from him from Montreal stating that owing to his health and a number of engagements already made, he would not be able to be with us.

Here is a letter referring to that letter of the Fire Marshal's, acknowledging our invitation. It was addressed to me at Evansville:

FIRE DEPARTMENT OF THE CITY OF CHICAGO. }  
OFFICE OF THE FIRE MARSHAL, }  
Room No. 14, QUINCY ST. ENTRANCE, CITY HALL. }

CHICAGO, ILL., Aug. 20, 1884.

C. K. DREW, Esq., *Evansville, Ind.*

DEAR SIR: It is with pleasure that I acknowledge the receipt of your cordial invitation to our Association of Fire Engineers to be present at the Fifteenth Annual Meeting of the Fire Underwriters of the Northwest.

The same will be presented to them when convened, and I can almost now assure you that they will avail themselves of your kind invitation. Thanking you, I remain, yours respectfully,

D. J. SWENIE,  
*Fire Marshal.*

Mr. Blackwelder—

It strikes me that for the purposes of this address this evening, we should not embarrass the attendance of persons whom we are perfectly willing to have present. It would seem to be a great deal of red tape to require the Local Agents to be admitted by means of cards. I see no objection in the world to admitting all the Local Agents in the city who care to attend, unless it be that there would be danger of having the room too full. That is the only reason I hesitated about offering a motion a moment ago, thinking that, with the Chief Engineers' convention and this other convention that has been invited, by removing that restriction, we might possibly have a crowd that would make it unpleasant. If there is no danger of that, I think you ought to make the invitation a little more free, so as not to bother the members with tickets at night. I do not like to offer that motion even now, though I rose for the purpose of doing it. I merely call attention to it, because if not done now, it could not be done later. I will, however, offer the motion that for this evening Local Agents be ad-

mitted without cards. I would just as soon it would be defeated as passed, if that is the wish of the Association. I have no objection at all to its being defeated.

The President—

I will suggest also, as it was brought before the committee last night and laid over until to-day, that the Association pass upon the question of the admission of ladies. Some gentlemen have their wives here, and some have other fellows' wives that they would like to bring. The Association might as well decide what they are going to do about that.

Mr. Blackwelder—

I would like to have it understood, so that we will know what to say. We are all asked questions on this point, and I have refrained from giving answers, saying always we would be glad to have them present; that I supposed it would be all right. I offer the motion in that form, or I will change the motion. No I won't. I will offer the motion I made before, and anybody else who feels so disposed can offer an amendment, that Local Agents who are resident and visiting be invited to attend the lecture of Professor Ordway this evening, without the formality of presenting cards at the door.

Mr. Hobbs—

I will make the amendment so as to include their wives and other fellows' wives, as the President suggests.

The President—

All right; and the ladies. Any remarks, gentlemen?

It is moved and seconded that Local, Resident and Visiting Agents be admitted to the lecture to-night without the formality of cards, and that our lady friends be also admitted.

The motion was carried.

Mr. Littlejohn: I move we adjourn to 2 o'clock P. M.

The President—

We are invited by the Adjustment Exchange to visit them at their room, No. 14, 177 La Salle street. The gentleman said it was not a drinking invitation, but it was a smoking invitation.

The motion to take a recess was then carried, and the Association took a recess until 2 P. M.

AFTERNOON SESSION.

The convention re-assembled at 2:30 o'clock p. m., with President Drew in the chair.

The President—

The gentlemen will come forward and we will go on with the programme. We have sent for some fans and will be able to cool you off directly. In accordance with the resolution passed this morning by the Association providing for the appointment of committees, the Chair has made the following appointments :

*On Death of Mr. Coombs*—A. W. Spalding, Thomas F. Tuttle and Walter Scott.

*On State and Local Boards*—John Howley, William L. Jones and H. H. Hobbs.

*On the Three-Quarter Clause*—C. W. Potter, Holger De Roode and E. V. Munn.

*On Rates on Dwellings and Contents*—Thomas H. Smith, W. F. Fox and J. Peetrey.

*On the Prevention of Fires*—George W. Adams, O. C. Kemp and J. Irving Riddle.

The committee that the Association asked to have appointed on the death of Mr. Collier I will announce before we adjourn.

I have now the honor to introduce to you at this time, a gentleman whose name is as familiar in our mouths as a household word, Mr. J. B. Bennett, of Indiana. Before Mr. Bennett begins I will repeat a request sent up to the Chair two or three times, that gentlemen will not smoke in the room. It is offensive to two or three, and if there is only one that it is offensive to, of course his rights in that respect must be regarded.

Mr. J. B. Bennett then read the following paper :

HALF AN HOUR OF INSURANCE TOPICS.

MR. PRESIDENT AND GENTLEMEN :

"Valuable goods are usually in small packages," and your convention certainly is rare and choice, in contrast with the big and boisterous ones that recently met in this magical city. Judging from the interests you represent, yours is by no means the least important, for in this country the business of fire insurance now covers risks to the extent of \$11,000,000,000. As this immense sum is but about seventy-five per cent. of the value, you are the representative guardians of fully \$15,000,000,000 of property. Consider for a moment what fifteen thousand millions of wealth actually is—

the power, labor and influence of that immense sum, and what its activities effect and imply !

Only a brief fifty years ago an insurance agent in these parts was almost as scarce as the white elephant. A few agents were on the frontier then— forerunners of the proud civilization which is such an ever-present miracle all around you. They were the St. Johns preaching in the wilderness the gospel of indemnity, faring on locusts and wild honey, as fancy paints it, but on hog and hominy as matter-of-fact. Their idea of a tall building was the Tower of Babel or a seventy-five-feet church spire. They sang from pole to pole, yet never dreamed what giant spiders would spin their airy webs from pole to pole on the public highways. One hundred and twenty thousand miles of rail and the lightning express could signify to them nothing more than worm fencing.

Leather fire-buckets did not hint of steam fire-engines or salvage corps. The tavern afforded no idea of mammoth hotels, corn dodgers of a new process flour-mill, or canal tow-lines of cable cars. The scenes and enchantment you behold in daily duty was then a sealed book. Of such is the past, but what of the future? With all these present advantages of mind, money and auxiliaries, what brilliant hope and promise must the scroll of the coming half century unfold to those who enter on the stage of action in such a propitious period !

At present the annual premiums amount to one-fifth the revenue of the United States Government, while the fires equal three-tenths of the same; or, premiums two-tenths, the fires are three-tenths of the annual revenue of the Government.

The premiums and the fires contrast as follows :

Premiums.		Fires.
\$87,000,000.00	- - - yearly,	\$120,000,000.00
7,250,000.00	- - - monthly,	10,000,000.00
238,300.00	- - - daily,	328,700.00
9,931.50	- - - hourly,	13,700.00
165.52	- - - per minute,	228.00
2.76	- - - per second,	3.80

The fires being 137.93 per cent. to premiums collected. Interest on premiums for a fraction of the year are not included. With this exception, the statement is fair and comprehensive.

That, gentlemen, is the daily task you have to grapple for profit and success. It is no alarm or distorted fancy, but the plainest of figures and facts recorded on the tablet of time, under the banner of the Fire King you faithfully serve. You who are astute may read the riddle between the lines where the crooked channel of profit runs, but still you will realize you are ever within the *domain of disaster*, requiring constant watchfulness to prevent your being rendered unable to come up smiling when time is called.

In 1883 the labor devoted to this business cost \$17,500,000. The \$87,000,000 of premiums in the aggregate, seemed no profit whatever to the capital invested, and all the work was accomplished at \$750,000 actual net loss! Much is now heard about the rights of labor and capital. You will freely admit that capital has an undeniable right to fair profit; still it is a noteworthy fact that the capital of the canals, railroads and insurance companies have never secured a fair realization of profit in the United States. Is that one of the lost arts? They have been treated mulish—as a great public convenience, possessing rights no one was especially bound to respect. The outside pressure has proved much too great. These capitals have been captured, enslaved and recompensed in such unbusiness-like ways you have to hunt for the profits with a microscope. The history of Fire Insurance shows that ten companies have been crushed for every one that survives. Why such has been the lamentable fact, is left to your future consideration.

#### THE FLIGHT OF TIME.

Hazard, rate, amount and time is the scope of our arithmetic. The margin for any profit, even with the most favored ones, is now dangerously close, and not a few have to gain it by the skin of their teeth.

In '55, when the dwelling tariff first secured its double-back-action attachment in the clip of 33½ off by 2 for 3—and 40 discount by 3 for 5 years, the rates were then double the present tariff, commission but 10 per cent., taxes and expenses light, with interest upon investments double what they now yield. And while these items are relatively all very important, the most vital one is that included within the flight of time itself. Only permit it, and so occult is this factor that competition would singularly ignore the point and press discounts and long transactions to the verge of desperation, in a fight for commissions; in fact, cut-throat competition. The present tariff for business buildings allows 16½ discount in 2½ for 3, and 20 per cent. discount in 4 for 5 years. This, on the current annual rates, is very foggy for profits.

The efforts which were made in 1883 for a fair advance in rates, while successful in annual and short term business, has been more than counteracted through discount got by running the trade to long periods. If all tariffs were made adequately remunerative, with a view to justify such rebates, there could be no danger from such long term economy. Stock companies are as competent as the mutuals to fix correct rates for 3, 5 and 7 years, or perpetually, if such were required. But when the future is discounted too largely and sharp competition forces excessively close annual figures, and omits to take full cognizance of financial fluctuations and other contingencies, it is then that heavy discounts, with high expenses, become a two-edged sword, so dangerous it may prove the Moloch of fate to many who handle it freely.



## LOWER THE BURNING LINE.

A well organized system of inspection, under practical control and rules, with local laws and moral support to make effective, could reduce the burning line fully 25 per cent. A large number of fires now attributed to incendiarism and unknown cause, are nothing but the natural outgrowth and consequence of misconstruction and neglect, closely allied to criminal carelessness. It is startling with what certainty a good inspector can foretell, with a considerable degree of accuracy, the speedy destruction of much property that, at casual observation, seems to be ordinarily safe, but which will be found, by a thorough inspection, little better than a slow-match, fixed and primed to go off in flame by some trifling contingency. A number of Massachusetts companies have long since demonstrated what can be accomplished in this line, by treating primarily the cause, and not giving chief attention to the effect of fires. Their work reduced the burnings between 25 and 50 per cent. to the classes they inspected and specially cared for. "*Protected by Insurance*" should have some broader and better significance than the term now implies.

One of the most efficient marine inspectors on the Western waters, when he finds a boat in bad order and condition, calls for an adze, chops into the rotten parts, and when public security requires it, he condemns the boat, orders her into dock for full repair, at considerable expense, say \$1,000 to \$10,000, before reinstatement of seaworthiness. This is right; but imagine a fire inspector going around with an ax condemning the shams and worn out things he came across, and the warm and lively reception he would meet with, all because of an erroneous education in these matters! Consistency is a rare jewel. Father Payne, a man of blessed memory and one of the salt of the earth, rode through Texas in 1865-6, adjusting losses with a shotgun strapped on his back. The shotgun policy might not work successfully everywhere, but it did admirable service then and there.

Is this too big a subject to handle? Can we afford to be always indifferent to it? Are we not our brother's keeper in many ways? Will the public burn just so much property anyway, and is it our only duty to figure it up and tax accordingly? Shall the motto ever be, "After us the deluge?"

We dissipate by fire thirteen times more than any other nation, and this wastefulness is so alarming that no good citizen will encourage long such neglect that tolerates this senseless dissipation, imperiling the public welfare, as well as the reputation and fortune of Underwriters. Yet it is so universally admitted a man has the privilege of playing fool in his own house, that the reluctance to take firm hold of this subject can only be overcome by the sharpest lash of misfortune, as a penalty and corrective of this abominable neglect.

Who belong to the wide awakes in this campaign, or is the list short enough for a badge of honor?

OUR BOYS.

You have not forgotten the homely old legend of the wise man who started his boys in the world with the lesson how easy it was to break the willows separately, but when bound together was beyond their united strength to effect, and so the brothers went forth together in the battle of life, and attained the success and happiness they desired and richly deserved. Two of our boys at the capital of a neighboring State quarreled over their matters the past year. They hung their harps upon the willows, a suit for \$5,000 was filed, and attorneys were duly called to take a hand in the jamboree. It was not another case of monkey and the cheese—the cheese not being put into the scales. The issue was one of some local and general interest, because it was a flank movement on the Compact System, the substance of the case being merely a fight over commissions, tangled up with considerable sharp practice. The defendant, by demurrer, put the entire profession into such false position and bad odor that the judge, on the narrow issue brought before him, turned both boys out of court as not entitled by the wrangling set forth to any right in the halls of justice. However, the judge did not handle the boys as roughly as the Cincinnati crowd treated their courts last May. There is an anecdote of the bench that there once was a judge who locked up together all quarrelsome applicants for divorce till they could agree on the case harmoniously, with the most happy results, and if this modern official could by any plan be relegated for sufficient time to the ranks as an insurance agent, a better understanding of the subject and sounder law would certainly result as a natural consequence. The main suggestion is, that such affairs should have the attention of the profession at large that personal quarrels would not get before the courts in a damaging way, through either one of the parties going squarely back on the fraternity, or through any default the courts should drift into a damaging attitude. While this case had little more real effect than a suit for a farm in the moon—it mainly exhibiting the weakness of the issue and the folly of the defense—yet as a small bolt, neglected, may get a valuable train off the track, such affairs demand some better oversight and attention than heretofore has been bestowed upon them. *United we stand, Divided we fall.* The Compact System originated as a treaty of peace between agents, to stop incessant strife and warfare. The companies are so distant that without any authority on the spot for prompt action, personal issues run wild. A game of base-ball cannot be successfully played between spirited contestants without an umpire. Taxes cannot be equitably determined without the aid of Boards of Equalization. The courts must have their regulations, fees and modes of procedure and appeal; the merchants, Board of Trade; the bankers, their clearance houses; all parliamentary bodies have their rules of order. Intelligent

direction and control is a universal principle in all governments—law mechanics, business, military affairs, science, religion, and all the concerns of life. Have not loose practices in insurance prevailed about long enough? Is order a pool? Is surveying and rating a ring? and are peaceful and harmonious rules—practices for faithful service—detrimental to the public welfare? But especially, in view of the excessive and honestly paid tax by insurance companies to the State, are they not entitled to the protection of the courts, and fair if not more generous consideration?

By the Compact System the nucleus of an Underwriters' Exchange is secured. An expert is its executive officer and surveyor of the body. On a few certain points he becomes an umpire, and also performs duties very similar to those transacted by a Board of Equalization in affairs of taxation.

It is exceptionally rare that a Local Agent can consider the business from the standpoint of its losses, or inspect risks critically. This is not a lottery, a commission or auction business. The merchant easily ascertains the cost of goods, and competition may be with him enterprise and the life of trade. Not so with the underwriter. While fire insurance is largely speculative, it is mainly collecting the fire tax. It is difficult to ascertain, even approximately, the average cost of the numerous and complex classes of hazard. All taxation should be uniform. This requires combined experience for a considerable period, and system and order among an army of subordinates demand uniform rules and rates, or demoralization will prevail. It does not deal with material in the sense a merchant handles goods, and consequently competition in insurance frequently means ignorance, while in trade it represents skill and positive knowledge. Through the agency system competition is abnormally active, unhealthy and extreme. In the insurance lexicon excessive competition is the death of trade. No mode of taxation is ever popular, either with the open-handed or the close-fisted; but when those who offer insurance to the public study its principles comprehensively their patrons will be better satisfied. It is not an exact science yet, though latent with all such principles. It is many-sided—a thousand-sided calling—from the characters, circumstances and risks it embraces. Probably it cannot be got into good order until the science of average in fires is much better known and applied than at present. Life insurance was all speculation before Dr. Price solved the law of mortality and made the Northampton tables. It now differs from fire insurance in the feature of accumulation instead of taxation and indemnity only. Mr. Charles Sumner understood this when he declared it bad political economy to tax fire premiums, and said, "Tax property, but never tax a tax."

At present, fire insurance is slowly progressing, almost imperceptibly, by four columns, into better position.

*First:* By that having a clear and comprehensive regard to the science

of average, with a practical application of its principles to universal trade—*The scientific brigade.*

*Second:* The one making discrimination and selection its main rule of practice—*The conservatives.*

*Third:* Those that combine a little of all features—*The eclectic.*

*Fourth:* Most of speculation, venture and experiment solely—*The guerrillas.*

How can the important and fundamental principle of average be applied in fire rating? All was chaotic in life insurance until this was secured first through the Northampton tables of Dr. Price, which laid the foundation for its pre-eminent success, notwithstanding the errors that proved to be in the details of Dr. Price's tables; but fortunately the errors were on the right side, in being plus for insurance but minus for the payment of annuities, as ascertained by the British government after many years' test, the government having gone into that business as a public trust, and adopted those tables as the basis of expectancy.

A single example in fire insurance will sufficiently illustrate the workings of this principle. After thirty years' experience in the United States, on the best attainable data: Starch works burn; \$1.70 per \$100. With that fact developed, add for expenses and profits, the average rate becomes plain. A 3 per cent. rate salts down into the treasury only 2 per cent., and the difference between 1.70 and 2 is for profits and contingencies. Take the average rate as a basis *to build upon for defects and exposures, and for solid foundation of growth and prosperity*—unless you want to come out minus—than now on luck at 1.50, and time will cure the practice. You will have the experience, and the starchmen the capital.

A competent committee of twenty-five, well selected from north, east, south, west and the central United States, to meet quarterly and give their combined labors during a year or longer on 100 hazards as a starter, could do justice to this subject. The American genius is specially to rise to the emergency; the time and occasion is ripe for just such work. There is no more danger from it to fire insurance than resulted from the study of vital statistics, by Dr. Price and others, to life insurance.

The average clause is a condition of fire policies in other nations excepting Great Britain and the United States. The tight little island must have been wool gathering or tight, indeed, when this blundering omission occurred. It was unfortunate the United States ever copied the error, like a Chinese tailor, patches and all. This principle of average is engrafted into the marine insurance contracts of all nations. It is founded on equity and justice, possessing the elements of equal rights completely; would economize specifications amazingly, and generally improve the situation, not less than 15 per cent.

Then, if an official fire coroner was required to give certificates of losses, instead of a notary, under good administration of the office, the

moral hazard would be almost exterminated, or reduced to a nominal item, say 5 per cent. This done, with such inspections as would reduce the burning line 20 per cent., a conservative and complete reformation would be successfully attained. Most, if not all of this, or better, will probably be secured within the next fifty years. Good, sound principles do triumph and will be worked out in time, "When the hurly-burly's done, the battle fought, the victory won."

The three subdivisions of city, town and county must have better regulations adapted to their respective classes of risks.

As a profession, the working members as a universal rule, are poor in purse, and constantly reinforced from the ranks of the poor and inexperienced. We ought to be good servants, but when the wolf is at the door necessity knows little and cares less about law, and therein lies the chief cause why the tariffs are so constantly disturbed, for poverty and ignorance, when active, next to crime, are a loadstone to all direct progress.

The very necessities of the business make co-operation and unity of action in an extended field imperative. To be valuable and permanent it must be founded on the corner-stone of good faith and executed in sound and equitable business ways. The interests at stake are too great and important to trifle with, and their nature too multiform and absorbing for struggling to generally thrive.

Unless this can be accomplished through plans that have been projected during the last twenty years, it will sometime be secured through a masterly consolidation of capital, or if not by capital, then by State or national action, which will not be apt to take hold of it in whole or part until corporate or individual efforts have been unable to accomplish the task.

#### EXTERNAL EXPOSURE.

It is safe to say, that one-half of all the property destroyed in this country is in consequence of external hazard. Those who trade or live in crowded localities are usually conscious that there is as much or a great deal more danger on the outside of their premises than the internal risk. This fact, which is instinctively recognized by the owners or tenants, has been sadly disregarded by us.

All great conflagrations everywhere in the world are but the operation of such hazard. So important is it considered in some countries that fire insurance is largely limited to this single danger. The penalty for not preventing a conflagration in one's premises is made to rest in a bill of damages which holds good in law for the injury done to neighbors by such burnings.

This brings out the estimate of the hazard entertained elsewhere as a blunder and crime against humanity, in strong contrast with the idle unconcern entertained of it in this land where we are so passionately engrossed with money making that measures for security are too often neglected.

Material without let or hindrance is gradually accumulated and most cunningly devised for big conflagrations, apparently solely to afford the brave firemen a gallant exhibition of their skill and ability to master the costly display of pyrotechnics. Who is benefited by this tremendous waste of physical force and comfort, and what's the use of all the performance? We are all so at fault in this affair, probably the less said about it the better, except *don't forget it in future tariffs*.

By the great fire of October, 1871, the internal hazard was a loss of \$300; the external of \$150,000,000! At Boston, November, 1872, the internal hazard loss was \$250,000; the external amounted to \$35,000,000! An incendiary occasions a fire of \$3,000, but the external agencies take it up and make it \$800,000 at Anoka, and thus it goes everywhere booming; even the beautiful city of Cleveland, Ohio, is no exception.

In fact, a close survey of property makes it a matter of astonishment that there are so very few fires. There are thousands of localities at this moment, and hundreds of thousands of people, with millions of money, entirely at the mercy of the fiery elements. Look at the defective fire departments, or their entire absence. View the abominable iron doors, made as a pretext for fire-proof institutions, to get lower rates, when fly-screens would accomplish almost as much resistance where fifty per cent. should be condemned. Survey the buildings from all quarters, especially the rear and sides. See the giant clusters of specials, and look at the tinder-boxes and fire and man traps as they actually exist! Walk deliberately through risk after risk in every block, and then fully comprehend the peril is sometimes no less than that of a powder-mill—the only difference, “slow but sure.” With a dry spell, a cold spell or a windy spell, how quickly the trap is sprung! Then calmly review what external hazard actually means, and what are adequate rates for this contingency.

In the palmy days of the National Board, external hazard had no prominence. The basis rate did not contemplate nor include it; semi-occasionally a reminder was printed, like a P. S. to a love-letter, to add for external exposure. The rules relegated it to the rear and neglect, instead of being set at the front prominently. Undoubtedly the National base rate was full, to provide something for contingencies, but this external risk was nevertheless grossly neglected. As the country becomes densely populated this hazard will come to the front by virtue of its own inherent activity and force.

Farm property, by reason of its general exemption from external danger, affords good proof of what risks are worth without it. Farm rates started at 1 per cent. per annum, and are down to 1.5 per cent. for five years, measurably because the physical and moral hazard only is included therein. Dwellings situated where the fire departments are able to cut external hazard, afford similar proof of what the physical and moral risk is by itself.

The items of hazard, labor and profits average approximately as follows: External risk, 50 per cent.; physical, 35 per cent.; moral, 25 per cent.; expense, 35 per cent., and profits, 15 per cent. This, in 100 parts, makes the external  $31\frac{1}{2}$  per cent.; physical,  $21\frac{1}{2}$  per cent.; moral,  $15\frac{1}{2}$  per cent.; expense,  $21\frac{1}{2}$  per cent.; profits,  $9\frac{1}{2}$  per cent.; equals 100.

A good physician endeavors to ascertain, with the component items, the nice proportions and qualities of his prescriptions, so as to exercise discrimination when it becomes necessary to do so, and why should not the underwriter apply similar aids?

It is unnecessary to go into the ocean of scientific inquiry which the subject of Caloric, or the science of Thermotics invites. Only the division of combustion, fire, flames, radiation, conduction and convection need attention and their practical application. This whole subject is full of valuable and interesting instruction. Only a suggestion or two is admissible here. For instance, Greek fire, which preceded gunpowder for 400 years, and is one of the lost arts, is believed to have been a product of naphtha, which you meet with in all paint-works, and elsewhere. The reason why wooden doors, well cased with metal, are better than all metal doors, is because wood is a poorer conductor of heat, and so encased may be isolated from the requisite elements for combustion.

The law of radiation is: "The nature of the surface being the same, the intensity of radiant heat is proportioned to that of its source, inversely as the square of the distance from the point of radiation, and greater as the direction of impingence on the necessary surface approaches the perpendicular," or is *affected by the wind or suction*.

External hazard demands both general and specific attention.

*First.* General, where the danger exists, but is indirect and indefinite, as in towns and cities or particular districts or areas, by applying a base rate for general conflagrations, and

*Second.* Specifically, from all direct and threatening external exposure, depending on the material, size, occupancy or inflammability, position and distance of the peril, less the precautions for defense, which demands positive treatment by a full and proper extra charge. The rule of distance for external hazard needs complete revision. It was made fifty years ago, and requires decided improvements. Evidently based on the width of a 60-foot street, 25 to 50 feet for dwellings, 100 feet for stores, 150 feet for specials, would be better adapted to present facts.

These laws are becoming so scientifically well known that it would not be too abstruse a problem to formulate better rules and scales to bring this peril into systematic order, and thereby accomplish lasting service to the whole profession, if generally adopted. At present we are at sea, without chart or compass, not having the advantage of good, dead reckoning on the subject.

The gist of this whole matter is, that a gross blunder has been com-

mitted in not charging sufficiently for the external hazard, and that its correction, happily, may be made an avenue to get the business back to a source of profit especially worthy of your study and attention. It would do no harm to even use it as a hobby for the next ten years, to make up for lost time. *A hint to the wise is sufficient.*

The President—

Before proceeding with the programme, I will state that I have here an amusing illustration of how great minds run in the same channel:

NATIONAL ASSOCIATION OF FIRE ENGINEERS. }  
CHICAGO, ILL., Sept. 10, 1884. }

*To the Board of Underwriters of the Northwest.*

GENTLEMEN: You are respectfully invited to attend a meeting of the National Association of Fire Engineers, to be held at the Grand Pacific Hotel, Sept. 10th, at 7:30 P. M., to take part in a discussion on the topic of "Spontaneous Combustion."

Yours respectfully,

HENRY A. HILLS,

*Secretary.*

The President—

The next thing upon the programme is our Annual Address by Mr. M. Bennett, Jr. I have now the honor of introducing to you Mr. M. Bennett, Jr., Manager of the Lion and Scottish Union National Insurance Company.

Mr. Bennett then read the following paper:

#### THE ANNUAL ADDRESS.

##### MY FRATERNAL VICTIMS:

The relations of principal to fieldmen and Local Agents are as the general to his lieutenant and privates—the success of either depends upon their mutual relations and the combined ability of all. Our professional success is an arch, of which the fieldman forms the keystone. A crack in the keystone or the head of the spear threatens the whole structure, and with *its* fall falls all. We know not which is to be more dreaded—an army of good soldiers with a poor general, or an able general with poor soldiers. Even if both be good, a bad lieutenant ruins all; if both bad, a good one sometimes can save all.

But thus early I digress. As your time is precious, and you have much to listen to of greater importance and interest than anything I can possibly say to you, I will plunge at once into my subject. A full stomach, unlike our friend Twist, rebels against more; and while a surplus is a good thing for the corporation, in mental and physical food an overplus impairs digestion. Too much is worse than nothing, and a dyspeptic mind or body a serious drawback to success. You understand your own busi-



ness much better than I do or can, and I may hasten to relieve your natural distrust and distress of anticipation, by saying that I have not come here to lecture you about insurance, or to cram you with axioms. Indeed, when I find my desultory remarks flowing out to so large an audience I am reminded of the old story of the man who, having invited all his acquaintances to attend the funeral of his child, who unfortunately was very dwarfed in size, properly apologized to the friends for presenting so small a corpse to so large an assemblage.

Seeing an advertisement in a western paper for a man who advertised to write speeches for congressmen upon any given subject, on the very favorable terms of five dollars for a five-minute speech, and three dollars for every additional five minutes, I wrote him that if he knew anything about insurance to please send me about twenty-five dollars' worth, but upon receiving his reply that, like the average legislator, he was utterly ignorant of all matters pertaining to Underwriting, I have been compelled to write out my own, which is the only apology I can offer for its quality.

In a funeral oration it is never appreciated to speak of the faults of the corpse. As a critical divine said in walking through a graveyard and reading the eulogies on the tombstones, "where are all the sinners buried?" But I am here attending a reunion, not a funeral, and whatever there has been of the corpse nature in our Association, it is being rapidly galvanized into a life to which we are all awakening from the trance of the past, and we believe this will prove a genuine "wake," and this well known body completely resurrected and resuscitated, blooming with new life, activity, success and perfect health.

On a previous occasion, before a similar body, I spoke at some length of the social side of our great underwriting problem. But as insurance is a dry business, literally and figuratively, I deem it proper to relieve the solemnity of this occasion by briefly addressing you upon the humorous side of our profession, in which I shall not attempt to ape a wit I do not possess, nor draw upon my imagination, but upon facts as they have actually come under my experience, presenting to you a collation of the whimsical and facetious jocosities and fantastic quiddities which, even in so matter of fact and statistically mournful a business as ours, sometimes and often comes up to relieve its monotony with an intense funniness.

In selecting this subject, I am not unmindful of Addison's remark, that "Humor is not nonsense of wild, unnatural fancies or distortions of thought; and that the man who is not able to read over his own scheme of absurd inconsistencies to himself without laughing, should have his humor, with his monstrous conceits, always under the check of reason."

According to an ancient theory, there are four principal humors—phlegm, blood, choler and melancholy. Now, phlegm is a queer combination, a sort of semi-liquidity; *to die of a rose*, as it were, in aromatic pain, with dry eyes, withering unwrung, of the genus pachyderm. Notwith-

standing none of us have it, it would not be wholly out of place in a fire insurance man, for, first, it is watery, cold and slimy; second, it derives its original signification from a Greek word, phlegma—a flame—a suggestive combination, though perhaps the water should come after the flame. As for choler and melancholy, we are all pardonable in the present chaotic state of our profession, if we possess our full share. But we all have plenty of blood, and have spilt it freely in the good cause; and I may be excused for the belief that, as variety is the spice of life, if any life is excusable for a combination of these varieties of humor, it is the insurance man's. And while a preponderance of any of the four makes a bad compound called an evil humor, a just balance, it is said, makes a very respectable compound called good humor. At any rate, so says Ben. Johnson, a man of whom we have heard. Ben's mother married a master bricklayer, and therefore he naturally proved a brick himself, although not an insurance man, but a mason, as he afterwards became, in 1596. He went upon the stage and appeared where his talent found its proper field, at the Globe theatre, in his comedy of humors, first, as "Every Man in His Humor," but later changing the name of the same comedy to "Every Man Out of His Humor," a fitting illustration of opposites. In 1616 he appeared in an original play by himself, called "The Devil is an Ass." We who have met him in adjustments cannot wholly accept his theory; still, in spite of his humor, James I. made him poet laureate, with a pension of 100 marks, and Charles the First increased his pension to £100. In Westminster Abbey he now lies buried under a tombstone bearing the peculiar inscription, "O Rare Ben Johnson." Notwithstanding this superscription, everything that Ben did was well done, and we are inclined to believe, as more appropriate, the epitaph suggested by Mark Twain for his favorite African cook, who always cried in the gravy, but caught fire in cooking the soup over a kerosene oil-stove, and was burned to death, "Well done, good and faithful servant."

Crabbe, by no means a soft shell, defines humor as literally signifying moisture or fluid—certainly a very appropriate synonym for underwriters—as not only having its influence upon the animal spirits, but on the moral feeling. Good for humor! Let us all catch it! But this proposition we will discuss later. Humor is the most variable part of the animal frame, but as frame structures are uninsurable perhaps we should eschew it, and while temper is a general and habitual state, humor is so fluctuating that it varies in the same mind perpetually, and denotes a partial and transitory state. Humor makes a man different from himself, therefore by all means let some of us cultivate it. But in order to be strictly scientific, there is a great difference between tweedledum and tweedledee, between being humorous and humorous. Humor, like wisdom, according to its original term "wissen," to know, signifies knowledge, but has so far extended its knowledge as to signify that faculty of the mind by which the knowledge of the

truth is received, and in a more limited sense the faculty of discovering the agreements and disagreements of different ideas. Forced wit is no wit, but seizes with an eagle eye that which escapes the notice of the thinker, and elicits truths which are in vain sought for, but lies according to Addison, in the assemblage of ideas, and putting them together with quickness and variety. The difference between dry and moist humor is hinted at by the ancients, and is, we suppose, that when the humorist is dry he generally finds it necessary to wet it. This accounts, we think, successfully, why so many in our business are so funny. But one thing to their credit, they never let it get *too* dry without a proper degree of moisture, especially in Chicago.

Book agents and lightning rod men, who think they have all the fun there is in the world and are the only abused class, should try insurance for a while. Trying to sell a fifty cent subscription book for four dollars, and endeavoring to force upon an Illinois farmer a new lightning rod, whose well-rodged barn, uninsured on account of the promised protection, has just been struck by lightning and burned to the ground with all its contents, is a pleasing pastime compared with many experiences of insurance men. If, like book publishers and lightning rod men, we could only get up copyrights and patents to improve our business, what a success we all could make of it, and what never to be accumulated wealth by the sale of these rights! Any Special, for example, who could invent a patent process for bringing an agent to heartily enjoy a cancellation, and the assured to appreciate an advance in rate, would become a richer man than Vanderbilt the first year; or some new process for producing a legislature who did not think insurance corporations fit and only subjects for plundering and hostile legislation, without any rights they are bound to respect; or a patent horoscope for finding the man who does not think his loss more than it is; to make the average insurer believe his risk is not the very best of its class in the town, and therefore entitled to a less rate than his neighbors; or the average town and city, that its fire department and future prospects are not at the head of all American towns and cities, and therefore entitled to the minimum rateage; to invent some dynamite machine which will explode the most universal and popular theory of every city and town, that because they never had a large fire they never will have, and therefore should not have their rates advanced to pay for those who do burn. As an illustration of this latter most desirable patent, we recently had two very remarkable coincidences. Just before the enormous conflagration at Savannah, by which half a square mile was burned, and 1,500 people rendered homeless, the citizens had been holding indignation meetings to protect themselves against the advance in rates made by those incorporated vultures, the insurance companies. At Utica, the very day before their great \$800,000 fire, which burned up an entire block, the *Utica Observer* had a two-column article on insurance rates, which was a grand

screed against the extortionate charges of insurance companies. The heading of this article was as follows:

"Business men say that Utica has to pay for losses in other cities and towns. With our unexcelled fire department they claim that the rates should be reduced. What will they do about it? A public meeting suggested."

But time at last makes all things equal, and retributive justice followed these attacks upon our poor, down-trodden profession. The mills of the gods ground not slowly, but seemed to be run by the patent process; for Sunday, at 2:00 A. M., the entire establishment of the observing *Observer* was in ashes, and the editor busy, instead of church-going with the rest of us, in making up his proofs of loss on the extortionists he denounced on Saturday, and our much-maligned and long suffering insurance companies were vindicated. Now, when this paper appeared in brand new type, by an even exchange of his old fonts with the companies, we presume its heading ran something like this:

"Business men truthfully observe in other cities they have to pay for Utica losses. Our inefficient fire department, which let a large block of twelve brick stores, many of them with fire walls between, in the heart of the city, including considerable damage to surrounding property, burn, renders a large advance of rates proper. Indeed, rates should be increased 1,000 per cent. so that other innocent cities and towns should not be obliged to pay Utica losses. What will insurance companies do about it? The public should compel the insurance companies to accept this advance in rates."

But did the editor editorialize thusly? Oh, no; for a stern chase between truth and error is far too long, and with an erroneous statement ten minutes ahead, truth cannot catch it in a lifetime. Perhaps you, whose companies have shed their tears over these terrible conflagrations, will say if this is the humor of fire insurance we do not want to catch it, and wonder where the laugh comes in, but there are those who laugh at a funeral even, and we submit that this on the whole is funny.

Among the numerous inventions of modern times we regret to notice the discovery by an eagle-eyed patentee of the West, that petroleum applied to shingles adds greatly to their durability. The innumerable applications to insurance companies by men who seem to consider them as hospitals, philanthropists, and benevolent institutions, also are permeated with a vein of humor, but the last request, which would seem to add insult to injury, was that received from a neighboring city asking a fire insurance company to contribute money for the purchase of fireworks with which to celebrate the Fourth of July, a good deal like compelling the poor fellow on the gallows to buy his own rope, especially in memory of the Portland fire, which originated from one of these liliputian incendiaries.

Our Mark Twain started a monument for Adam; but I knew a man in Bristol, R. I., so idiotically honest that when, after an appraisal and final adjustment, selling the goods afterwards at a profit, sent back his check for the balance to the insurance company, and I propose a dime subscription to erect a monument to his memory in Lincoln Park. Why our legislature, now in session, who seem to have nothing to do except to tamper with insurance bills, did not appoint him a conservator, or sentence him to an insane asylum, that such a bad example might be forever squelched, we know not. But this man was nearly as honest as the Special Agent of a well known insurance company, who having, at a railroad eating-house, called for boiled eggs, struck an unhatched chick, and sent up fifteen cents additional, the difference in price between boiled eggs and boiled chicken, on the ground that he never beat an eating-house. This is the man Diogenes was looking for with his little lantern, but never found him; but had that crusty old philosopher lived in our day, he would have found him right here in this room, without the aid of either his dog or his lamp. After this monument is safely constructed, we would recommend a gallows of gigantic size for the benefit of the man who invented parlor matches, and the ignoble villain who first discovered kerosene oil.

In forms of policies we often find unintended traces of humor much funnier than anything ever produced by Mark Twain or Artemus Ward. I give you a pair of samples that were actually sent to a well known company in good faith by the agent:

\$200—On his two stuffed snakes, one known as the Ohio Black Snake, 14 feet long, and one known as the Missouri Rattlesnake, being 12 feet long.

\$600—On his snake known as the Great Webster County (Iowa) Snake, being 18 feet long, alive and horrible.

\$150—On his 59 other snakes of different sizes and species (not to exceed \$50 on any one snake).

\$100—On his snake and other cages and appurtenances belonging to this show, and

\$450—On his automatic hand-power museum and musical instruments, all contained in the one-story frame, shingled-roof addition on the west side and adjoining No. 8 North First Street, Marshalltown, Iowa.

The other form is as follows:

Two Anzonx Models, \$600 each.....	\$1.200
Eight Anzonx Models of the eye, ear, skin, heart, head, etc.....	35
One Anzonx Model of the tooth .....	30

And here we have an example of the moral hazard of over-insurance; for why, when models of the more important organs of the human body, like the eye, ear, skin, heart, head, etc., should only average \$4.72 each, should a model of the human tooth, which can be bought for \$7 per set, including the eye-tooth, be prized at \$30? The form then further covers one female skeleton, articulated. We had always fondly cherished the idea that the divine sex were somewhat and sometimes given to articula-

tion. But the articulation of a skeleton! Shades of our mothers-in-law, defend us! The balance of the form covers as follows:

Fifty charts, all painted in oil, containing a general, a special and microscopic view of the human body, representing all the different parts of the body, commencing with the bones and ligaments and fractures, with special views of the joints; representations of the muscles in various parts with magnified views; representations of the nervous system, the vascular system, the arterial system, and all that is necessary to represent a full view of all the external and internal organs of the human body, many of the organs being from 10 to 100 times larger than life.

Not long since I had in my possession the policy of an insurance company—which, to relieve the grim suspicion of the survivors, I will say was recently carefully laid away in its little grave, from further mischief—issued to an insurance Manager, insuring his contingent! We trust this form has been patented before other Managers seize upon it, for we fear the Home Offices would not consider it in the humorous manner with which we are pleased to deal with it, did they know such a large moral hazard was introduced into the element of their American managements.

The claims made upon insurance companies are also often most singularly and diabolically fantastic. We may have heard of the butcher who lost his bull-dog—suffocated with smoke, during a partial damage to his stock—who made a claim for the animal as stock in trade, raw, wrought and in process; of the lady who claimed her false teeth and cork-leg under the head of wearing apparel; and of she who claimed the loss of a canary bird under the head of musical instruments. And as a fact, we knew of a minister who had his goods stored under a regular warehouse form, who made a claim for eleven barrels of old sermons, under the clause, "Goods sold, both delivered and undelivered." The Adjuster, however, was up to the case, as most of them are up to snuff, and disputed the claim, on the ground that the congregation was sold and not the goods! But what a moral hazard was here! And how many of you could have withstood the temptation, had you been a member of the distinguished divine's congregation, to have secretly applied the torch, had you obtained a good chance, had you known that eleven barrels of old sermons were waiting to be turned upside down and once more perpetrated upon your sacrilegious ears?

Even the calendar fiend of late years has been catching the humor, which was never supposed to exist in our profession. Camels have taken the place of coats of arms, very properly, too, we think, as this distinguished beast can get along without water, and carry their reservoir along with them, well calculated for deserts and heavy burdens, and to prevent spontaneous combustion. Roosters in this year of our Lord 1884 are playing a prominent part, and why not, if a goose saved Rome? Though what there is to crow about in our business for the last two years, we have been unable to detect. One well-known company presents a lot of different

sized devils to its calendar patrons. Many of us also remember the distinguished calendar got up by a well-known company some years ago, of a classical order, where Neptune, the god of water, was playing upon a burning city; but the lithographic firm, taking a poetical license with this calendar, and in order to make it graceful, tied a bow-knot in the hose; and the criticism of the calendar by an old fireman, like that of the Irish farmer, when called upon to criticise a famous picture by a well known artist, remarked: "It's all very foine, but who iver saw tin pigs atin pacibly in a row wid niver a fut in the trough?" And, as the fireman said, not without wit, "How do they get so much water through a hose with a knot tied in it?"

A company of which some of you may have heard—the Lion Fire Insurance Company—thought they had struck about the thing in the calendar line, a very handsome lithograph by Matt Morgan, published by a leading house in Cincinnati, representing a lion and lioness with unweaned cubs, all busily engaged in their daily and chief occupation of drawing their daily meal from the maternal fount. But a country agent put a quietus upon the distribution of this work of art, by notifying the company, that the first one he gave away to one of his best customers, not insured in the Lion, who had had a loss adjusted not entirely to his satisfaction, stating that the calendar was so suggestive it would not work, as, upon presenting the first copy to the aforesaid customer, he received it with a ghastly, hypercritical smile, saying that it was the most appropriate design he had ever seen for an insurance company calendar, as they were such a lot of suckers! This is not an original joke, and the present retailer thereof must not be held responsible for so odorous a comparison.

Our esteemed and most able President, in his letter of invitation, was good enough to observe that, having tried all kinds, he would like to hear from a Hartford underwriter. Although considering myself a sort of cross, at this date, between a Connecticut Yankee and a "blarsted foreigner," I felt very much flattered that I was yet considered an underwriter of the Hartford school. You may have heard what Mark Twain, now a resident of our city, said about Hartford the first time he visited it. "I have been," he says, "about ten days in Hartford, and shall return thereto before long. I think it must be the handsomest city in the Union in summer. It is the moneyed center of the State, and one of its capitals also, for Connecticut is so law-abiding and so addicted to law that there is not room enough in one city to manufacture all the articles they need. Hartford is the place where the insurance companies all live. They use some of the houses for dwellings; the others are for insurance offices. So it is easy to see that there is quite a spirit of speculative enterprise there. Many of the inhabitants have retired from business; but the others labor along in the old customary way, as presidents of insurance companies. It is said that a citizen went West from there once, to be gone a week.

He was gone three. A friend said: 'What kept you so long? You must have enjoyed yourself.' 'Yes, I did enjoy myself and that delayed me some, but that was not the worst of it. The people heard that there was a Hartford man aboard the train, and so they stopped me at every station trying to get me to go president of an insurance company.' But I suppose it was a lie."

I, however, have not been troubled in the manner described by Mr. Twain, in my efforts to get here upon this occasion. Some of you have heard of Hartford, and some of its insurance corporations have also been heard of by a few of you who are the best posted in the business. Still, before I am through you will be led to exclaim, as did the Queen of Sheba on her visit to Solomon, "The half has not been told"—you may have heard of some of our institutions, but not all.

Perhaps you do not know that we have in our State a Casualty Insurance Company which commenced business in 1880. While not located in Hartford, its head office is in a neighboring village called North Canaan, a place spoken of in the old hymn, "If you get there before I do, tell them I am coming too." During the last three years it has made rapid strides on the principle that nothing multiplied by something does not always give a very large product. The last annual statement of the company showed its entire solvency, owing mainly to the fact that in the Casualty business no re-insurance fund is necessary. Its gross assets on January 1, 1883, amounted to the magnificent sum of \$840.29, of which \$540.29 was the amount due for unpaid premiums, and the balance, \$300 cash, deposited in the Canaan Savings Bank. Whether this bank has been broken down under the immense load it was obliged to carry for this corporation we are not advised—probably it is still swimming on the top of the water, as it seems to be entirely too light to sink. Its cash income for the year was \$1,191.92, and its gross expenditures, including losses, brokerages, commissions and salaries, were \$1,132.03. Do not smile, my friends, for how many of you can show such a large balance on the right side for that notorious year? Perhaps also, gentlemen, you may think that in this part of America you monopolize all the mutual fire insurance companies of the country, but it is not so. We have *several* in our State. I will make special mention of the Washington Mutual, named for the father of his country and therefore cannot tell a lie, and we can probably assume its statement as sworn to is correct, with an over-estimate of nothing, with assets about the same, and upon that statement it is entitled to both the cake and the hatchet. On the first of January its gross cash assets amounted to the sum of \$90.54. Mr. Logan *pere* was president, and Mr. Logan *fils* secretary—no relation, as far as we know, to the next vice-president of our country, the brunetted aspirant from your State. These assets, we beg to inform you, were not invested in western railroad bonds, United States



fours, and other doubtful security, but was cash, as sworn to in the office of the company. It pains me, as a carpet-bagger from the wooden-nutmeg State, to say that its liabilities were more than its assets, as they swear that the interest on borrowed money amounted to the sum of \$750, but, very much to the credit and genius of the management, this was their gross liabilities—no outstanding losses, no re-insurance reserve, nothing due from other companies, no unpaid salaries, no taxes due. Their income is equal to their credit, cash received being \$206.74. Why they should, however, so recklessly mismanage their cash on hand and not place it in some good bank where they could get three per cent. on call, is a problem which Hartford underwriters, accustomed to the other way of doing business, cannot solve. We trust that Logan, *pere* and *filz*, are under satisfactory bonds, else one trip to Chicago would absorb the assets and leave the company badly in debt to the officers. You hypercritics who desire to analyze and go into details may like to know why they borrowed \$750; the expenditure account as sworn to in the Connecticut department shows as follows: "Paid for losses \$750 and no cents—cents with a 'c' is what we refer to; paid salaries, fees, etc., \$30.19." If they had had no losses it is very easy to see that they would have shown a percentage of profit unequaled by any of the American and foreign companies reporting to the New York Insurance Department; but alas! that gigantic, unfathomable and unbridgeable "if."

And this is encouragement to all of us—that a mutual fire insurance company in the State of Connecticut, named after the first president of this great republic, showed a loss ratio for the year 1883 of nearly 400 per cent.! But this by no means is our only mutual company. Do not think I give you the best at first. In Woodbury, Conn., we have a company, aged, respected, revered and venerable, called the Farmers' Mutual, which commenced business just ten years ago. Its gross cash assets, as sworn to—and we have enough faith in the honesty and integrity of Connecticut people to believe they will not exaggerate a statement to the Insurance Department, especially since our friend Benjamin Butler was elected governor of the neighboring State, where our most highly esteemed but critical friend Tarbox is Insurance Commissioner—amount to the sum of \$10. It also, like its junior and Washingtonian confrere, keeps its assets in the company's office. Alas! and I say it with bended head, the gross liabilities of this company amount to \$499.50. If we could throw off the \$499 from the statement we should pass it without a murmur; but alas! the same Brobdignagian shadow of the invulnerable "if." The total premiums received during the year in cash were \$15. This statement will bear investigation, and to it we call the special attention of Commissioner Tarbox, of Massachusetts. Where is that \$5 gone to? Are the officers under proper bonds? But we can pardon all this taint and suspicion of fraud, when we come to the expenditures. The salaries and fees, gentlemen, for the year amounted to exactly \$5, while the taxes

amounted to \$10. Here, my friends, is another illustration of the outrageous and persistent taxation of insurance corporations. Income, \$15; taxes, \$10; 66⅔ per cent. tax on the entire income! Unprecedented, barbarous, and unheard of! Therefore, my friends, when you wonder why our Hartford companies are not more successful, and why the *Ætna* and others are not much larger than they are, please bear in mind the fearful competition they have to meet with with the mutual companies of our own State, who take the very bread, as shown in these statements, from the mouths of the widowed and orphaned stockholders of our stock companies.

Do not dream that I have exhausted the solidity of the mutual institutions of our State, for unlike the sailor who, when served pork and hard-tack, with pudding for dessert, eats his pudding first, I have kept the best for the last. We have, in our State, an institution known as the Harwinton Mutual, whose president bears the name of Barbour, who, as you will see from the expense account hereinafter named, shaves close. For a regular antiquarian, mutual aboriginal, commend us to our Harwinton Company as a genuine paleontographical corporation of the old school of conservative fossils, long since extinct; a fly unspidered in the cobwebs of antiquity, and it should promptly change its name to the *Megatherium Mutual*, a regular antediluvian paleozoic, of the carboniferous ages. The sworn statement of this solid institution shows the total gross cash assets, consisting of cash in the office of the company, \$61.50. We commend the astuteness of this corporation to the great institutions, of keeping their money where they know where to find it, like the darkey who, when he dropped the tea-kettle in the bottom of the well, claimed it was not lost, because he knew where it was. Methinks I hear a murmur of wonder where these large assets could come from, but by a singular coincidence, without the aid of perjury, we believe, it shows that the income for the year consisted of cash received for premiums—\$61.50. We regret to say, however, that the liabilities for unearned premium amounted to the large sum of \$1,229.87, and therefore, by the same ruling which the rest of us have to survive under, their assets seem to be somewhat impaired—to the tune of about 2,000 per cent. But when you come to the expense account, it is a model to be followed. Gross expenditures for the year, \$19.75, consisting of taxes \$10, and all other payments and expenditures, including losses and salaries, \$9.75. Happy Harwinton! Blessed be nothing annually!

There is no house that we know of that will keep out an insurance agent, except the poor-house and the State's prison. For skill and shrewdness they are supposed to have no equal. We have in mind one from Connecticut who was sent to buy a patent, which, while considered very desirable to the buyer, he wished to obtain at the smallest possible price, and selected an agent who would be considered by many an

unappreciated medium. It is needless to say that the insurance agent not only succeeded in buying the patent at a less price, but insured the owner, taking the patent as part pay for the premium.

Tom Moore must have been an insurance agent when he wrote the famous lines: "Assurance never failed to get admission to the houses of the great."

A well known clergyman in Waterbury, Connecticut, astonished his congregation the other Sunday evening when the fire alarm rang and numerous anxious ones started for the door with what he considered undue haste, by saying he hoped the gentlemen would not disturb the meeting by going to the fire, as there would be a greater fire some time which they would all want to get away from.

In a loss of W. J. Quan & Co., 49 Michigan avenue, in the city of Chicago, the proofs give the origin of the fire, "rats in pile of green coffee in sacks," and we respectfully submit an interpolation in the Chicago schedule of twenty-five cents for rats on the premises, and, if the hazard is as large as the Chicago rat, this is but a small charge.

There has been of late years a great divergence of opinion among underwriters, especially on the Pacific Coast, where this business is a specialty, as to the desirability of insuring grain crops, and we are accustomed to think that these modern times of moral, physical and incendiary hazard are the worst of all periods known in the world's history; but some three thousand years before the old *Ætna* was organized, when, we presume, fire insurance companies were unknown, very sharp and well posted incendiaries prevailed, who seemed to understand their business, and to have patent and most successful methods of their own which fully equaled the candle machines and other inventions of our day. Mrs. O'Leary's cow, my friends, who in a moment of ill-timed passion lifted up her sacrilegious heel against a kerosene lantern, and literally chic-cow-coed this noble village and our companies, was not the world's first incendiary by any manner of means. To those of us who are thoroughly familiar with the Scriptures, which I presume includes every man here present (this statement may not be orthodoxically Washingtonian and entitle the writer to the hatchet, yet, as Mrs. Opie says, lying consists only in the intent to deceive, we think it will pass), may remember our friend Samson, who was quite a successful firebug in his way, and a bad man to have for a neighbor where he was offended. The 4th verse of the 15th chapter of the Book of Judges gives us a very lucid account of the exploits of this ancient incendiary, who went out and caught 300 foxes, turned them tail to tail, put a fire-brand in the midst between the two tails, set the brands on fire and let them go into the standing corn of the Philistines, burning up both shocks and standing corn, with the vineyards and olives, exactly as in our day. A woman was at the bottom of it all, the act being one of revenge upon the Philistines for the meddling with Mrs. Samson. The Philistines there-

upon came on and cremated both his wife and his father-in-law, the Hittite, but, as far as we know, with strange injustice unknown to modern times, the mother-in-law escaped without injury.

Abimelech, whom you old Sunday School scholars probably remember, and who lived about 200 years previous to Samson, as related from the 47th verse of the 9th chapter of the same record, did even worse, committing arson of the first degree, piling boughs of trees against the door of the tower of Schechem, crowded with people, and set them on fire, burning and smothering a thousand men and women; and if any of you Biblical curiosity hunters wish to know what there formerly existed in the fire-proof line in those days, let them read of the tree which, set on fire, could not be consumed, as in the Third Book of Exodus. While I do not come here as a missionary, these items are quaintly interesting as illustrating the fact that incendiaries did not commence with insurance companies.

My friends, let me conclude these meandering and somewhat desultory remarks with a few more serious thoughts. The fieldmen are the sinews and nerves of our corporal existence. It is well that we should emulate to some degree the spirit of chivalry. For, however overstrained and fantastic were many of its doctrines in the days of feudalism, they were founded on generosity and self-denial. Scott said if the world was delivered of chivalry it would be difficult to conceive the existence of virtue among the human race, mindful that the largest mind is that which can forget the most. To simply understand one's own individual interests, and faithfully pursue them only so long as we can identify them as our own, at the expense of others, is simply to misunderstand them. Industry and perseverance accomplish everything, and are needed to the attainment of any end. In our business, as in all other occupations, perpetual pushing is by all recognized a prominent factor in its success. Even better than to strike when the iron is hot, is to make the iron hot by striking. Lack of knowledge is one great cause of failure. We all recognize that the chief impracticabilities we meet in our business, and the worst stumbling block to success, is competition based upon ignorance. We believe in practice *versus* theory, and in experience and sagacity against stupid prejudice and illusory beliefs. Therefore, do not perpetuate error, but assist to deliver us from the eternity of ignorance. While we may well live in our own vital individualities—and each mind is entitled to its own method—by the aggregate combination and comparison of views, we cannot fail to be benefited. Outside of the education a man gives to himself, he can find one that he receives from others of equal or even greater benefit, and we can often well afford to adopt the well-grounded opinion of others.

My friends, I am as much and as radically a hobbyist as any of you. But the concentration of all my experience is, that no association can reap the highest success, either individually or collectively, unless the

minority yields to the majority. This is the only safe ground. The success of this Association depends upon its good common sense; for common sense is simply instinct of original brain, born in its possessor and aided by cultivation, and is but a modification of genius—possibly uneducated brain, but brain for all that which, although its possessor may neither be able to spell, write nor talk after a collegiate model, yet in its maxims; while the man of common sense may murder the king's English, he will never slaughter his company. Common sense has been defined as the average sensibility and intelligence of man, undisturbed by his individual peculiarities, which, in spite of culture, is a rare commodity. Walpole declared common sense was the best wisdom he knew of, and the best philosophy. And Pope, that fine sense and exalted sense are not so useful as common sense, nor forty men of wit equal to one man of common sense.

It is at these feasts of social and mental reunion that our profession—the success of which the ignorant base upon chance—is being gradually digested into a system in which chance presents its minimum, and which is amenable to a law as inevitable as any principle known to science. The proverb commends itself to us, that “Discretion is the better part of valor.” Let us, then, be discreet, for discretion is the operation of reason, and a guide to win. “A prudent enemy,” it has been said, “is preferable to an indiscreet friend.”

We thoroughly believe in these meetings of the fieldmen; in the skill, observation, diligence, vigilance and patience, firm but constant, coming from this intercourse of interest, imparting and receiving knowledge. Locke laid the depth and extensiveness of his own knowledge to a rule he had laid down, of conversing with all descriptions of men on those topics that formed their own peculiar profession and pursuits; and, as Dr. Watts well says, “The notions and sentiments of other judgments, as well as our own memory, makes our property and turns it into a part of ourselves.”

There should be a golden thread which unites us together, which not even a drawn sword can sever. Let the corner-stone of our union be mutual devotedness to the best and truest principles of our business. Determination should succeed consultation; deeds hold the balance of power; practice is more powerful than profession. The promotion of mutual fellowship inspired by these gatherings increases our pleasure, profit and ambition, that triangular motive of human action; and perhaps with us the greatest of these is profit. Certainly there is nothing greater than a prophet, and the echo of previous years gives its hollow response.

Success anywhere is founded upon concentration. No business, no organization, combination or association can or will succeed without concentration of power in some one head. So, as in church or State; if the head fails, the fault is with the selection, not with the system; and the

locality of the head should be nearest the convenience of the members. The greater the concentration, when based on ability, the greater the success. Upon whom and in whom the responsibility, if not competency, concentrates, is a problem, the importance of which must be sustained by an intelligent and impartial analysis of the business for the last twenty years. Continuing to wait for the black sheep to die seems no longer a necessity, for long before that time comes the greatest underwriter among us will be represented by a pinch of dust. Let us then keep together, and those among us who do right—constituting, we are happy to believe, the large majority—do the best we can, by moral suasion and sound logic, to convert those who do not. Furnish a cannibal with a little food, rather than turn cannibals ourselves and live on each other. As for the expense, every dollar is well expended. We cannot invent perpetual motion, but we can and do develop perpetual pushing, remembering that the successful working of everything depends upon perseverance and right doing. Let us all, therefore, as we separate from this gathering, proceed once more to the front and to success, with renewed determination, good will and ambition, with the motto inscribed on our banners: *Experientia Docet*.

The Secretary read the following letter :

NATIONAL ASSOCIATION OF FIRE ENGINEERS. }  
CHICAGO, ILL., Sept. 10, 1884. }

J. C. GRIFFITHS, ESQ., *Secretary, Chicago, Ill.*

DEAR SIR: Yours just received and read before our meeting. I take pleasure in informing you that this Association accepts your kind invitation to meet with you this evening to hear the lecture of Prof. J. M. Ordway. After which, the convention would be pleased to discuss the question of Spontaneous Combustion and Friction, and all matters relating thereto.

Yours respectfully,

HENRY A. HILLS, *Secretary.*

The President—

Gentlemen, I hope that none of you will leave the hall. I can say this to those of you who do, that it will be your own loss. We are going to have a very interesting paper now from Mr. C. C. Hine, editor of the *Monitor*.

Mr. Hine then read the following paper :

#### AN EFFORT TO ASCERTAIN WHAT THE MATTER IS.

MR. PRESIDENT AND GENTLEMEN:

There has always and everywhere been something the matter with everything, and insurance only accords with a general law, when it groans and travails with all creation! From the first days until now, improve-

ments have been made and advances secured by finding out what the matter is, so as to apply needed remedies. He, therefore, who makes only a partial diagnosis of insurance, and points out even its minor ailments, contributes by just so much to the improvement of practice and the general welfare of the profession.

I have listened, as I have passed from office to office, to the constant iteration of "What is the matter with this business of ours?" "Why don't we make money?" "Where is the difficulty, and how shall it be remedied?" I have talked it over with numerous officers and Managers, and have listened to divers dissertations on the rate question, and the expense question, and the questions of lines and term business, and forty others—sometimes to my great edification.

Most men are disposed to take the simple mercantile view of insurance, and to say that all there is of it is a question of price; you must take in more money than you pay out, and increase your rates until you do this, and then the business will be profitable. This is very true, but it is very general, and there are, in so complicated a business as insurance, a great many impediments to the application of simple remedies; for insurance, like all outgrowths of advanced civilization, is more or less complex and abstruse, and it must be studied and criticised and improved with that fact in mind.

It had seemed to me that there ought not to be any serious general complaint. The bases of our practice appeared to be good compared with the past. We have associations, both local and general, which fairly cover the land with their reformatory net-work. There never were so many or so efficient organizations for the good of insurance as at present, and I did not want to believe that they were failing in their mission. I had looked upon the Union in the West, the New England Exchange in the East, the Southeastern Tariff Association in the South, the numerous State Associations, and the compacts and multitudinous Local Boards, as the salvors of the business, and I am happy to state, in advance, that the series of statistical investigations upon which I entered, in view of the somewhat general growl, have rather confirmed me in the good opinion entertained of those organizations and of the generally satisfactory condition of the business, largely through their instrumentality. You will say, then, that either I have not found out what the matter is, or else there is not so much the matter as many pretend, and you will not be so very far out of the way in either respect; but I have found a good many interesting and instructive things, and have arranged them for you in a series of object lessons, which have interested me greatly in the preparation, and which, I cannot doubt, will interest you also, and perhaps be instructive and useful to the craft.

TABLE No. 1.

Table showing Fire Risks in force, Fire Losses, and the Percentage of Loss to amount at Risk, for Twenty-four Years.

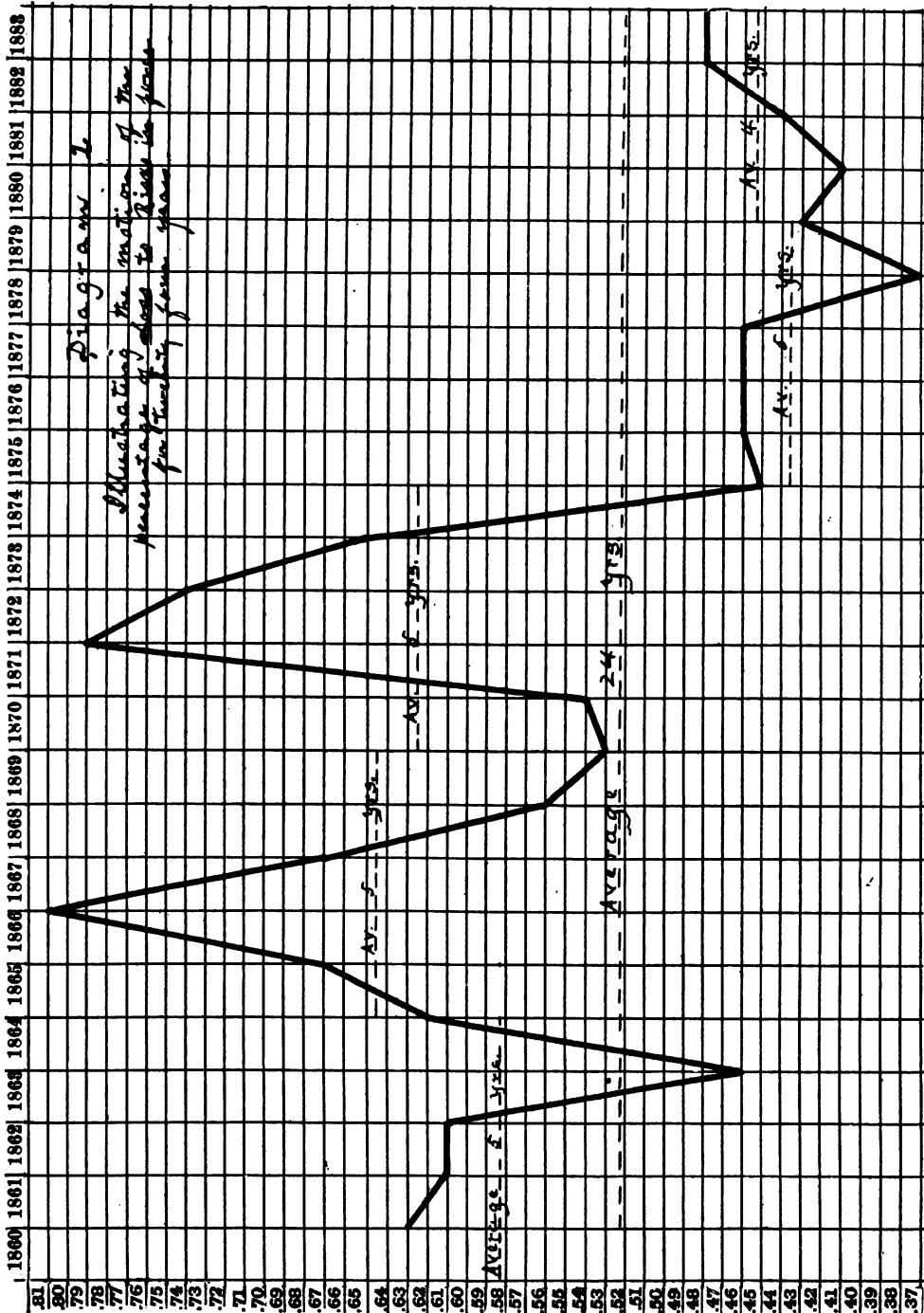
YEAR.	Fire Risks in force.	Fire Losses.	Loss to Risk.
1860.....	\$1,345,004,487	\$8,450,969	0.63
1861.....	1,258,972,728	7,665,985	0.61
1862.....	1,378,766,641	8,341,380	0.61
1863.....	1,612,861,852	7,821,444	0.46
1864.....	2,223,833,544	13,705,890	0.62
1865.....	2,564,112,505	17,264,617	0.67
1866.....	2,945,881,297	23,913,745	0.81
1867.....	3,165,666,666	21,169,682	0.67
1868.....	3,420,490,029	19,283,978	0.56
1869.....	3,778,713,296	20,054,341	0.53
1870.....	4,085,907,596	21,869,440	0.54
1871.....	3,987,386,026	31,617,273	0.79
1872.....	4,529,668,179	38,728,763	0.74
1873.....	5,783,777,818	37,731,638	0.65
1874.....	5,889,403,314	26,199,812	0.45
1875.....	6,089,507,839	27,695,628	0.46
1876.....	5,914,565,904	27,148,687	0.46
1877.....	6,008,976,461	27,467,852	0.46
1878.....	6,229,812,193	23,261,969	0.37
1879.....	6,673,099,069	28,787,630	0.43
1880.....	7,184,511,455	29,772,356	0.41
1881.....	7,949,581,516	34,712,071	0.44
1882.....	8,534,253,737	40,682,025	0.48
1883.....	9,359,423,527	44,893,676	0.48
	<u>\$111,807,677,179</u>	<u>\$582,740,296</u>	<u>0.52</u>

Fire Risks in force, Fire Losses, and Percentage of Loss to Risk, for periods of Five Years.

YEAR.	Fire Risks in force.	Fire Losses.	Per- centage.
1860-1864.....	\$7,813,939,252	\$45,485,668	0.58
1865-1869.....	15,874,363,793	101,686,313	0.64
1870-1874.....	24,226,142,933	151,146,421	0.62
1875-1879.....	30,865,460,966	134,361,766	0.44
1880-1883.....	33,027,770,235	150,060,128	0.45
	<u>\$111,807,677,179</u>	<u>\$582,740,296</u>	<u>0.52</u>



DIAGRAM ILLUSTRATING TABLE No. 1.—LOSS TO RISKS IN FORCE.



## LOSS TO AMOUNT AT RISK.

You know how we all warm up to a man who preaches the doctrine which we ourselves believe! In the course of my peregrinations I came across one astute gentleman who gave, as his solution of the present assumed unprofitable condition of the business, the fact that the companies were loading themselves with enormous aggregates of risks, forgetful of the inevitable fact that a steady and inexorable yield of losses must result from all these millions written, and that this law of *average loss on large amounts* was what was slowly but surely sapping their foundations. This thought, in some of its modifications, had for years been a favorite with me. I have written numerous *Monitor* articles on the texts: "Volume of business means volume of loss;" "A given line of risks—so many million or hundred million—*must* yield an average crop of losses of a tolerably even growth year by year." Now, it is a self-evident fact, as well as a law of mathematics, that the probability of fluctuation decreases as the factors of computation enlarge; so, as the companies reporting to the New York Insurance Department had written annual aggregates of billions for the past quarter-century, it was obvious that I could draw from these enormous figures a table which would confirm my favorite theory, show how irrevocably it was wedded to the vital facts of fire insurance, and give me a fine illustration with which to point a moral! I got down the twenty-four volumes of New York Reports and went to work. As I progressed, I determined to emphasize my work by drawing out the results of it in a chart, and so present a graphic representation of the facts to the eye in a striking and conclusive manner. I will confess that the first result was one of the most unexpected surprises of my professional life, and that the original sketch of the diagram, which I now show you (No. 1, see opposite page), took me so aback that I concluded that I must have made a radical blunder in my computation, and I threw aside the whole thing and began anew! Another journey over the same statistical ground, however, brought me to the same surprising result, and I was forced to accept the fact that fire insurance is literally and always a business of zig-zags—a venture from which fluctuations cannot practically be eliminated!

Let me stop a moment to explain the diagrams. First, there is nothing new or original in the use here made of them. Charts of this sort have been used, time out of mind, to bring forcibly before the eye comparative facts of a statistical or mathematical character. In the present case I have placed the years along the top and the percentages at the side, so that the chart before you shows that in 1860 the loss was sixty-three cents on each hundred dollars of fire risks in force. The next two years it was sixty-one cents; then, without apparent cause, it fell to forty-six cents, and again as suddenly rose to sixty-two cents, a fluctuation of say

twenty-five per cent. in a single year, and a spasmodic jump in amount from \$7,300,000 in 1863, to \$13,700,000 in 1864. This upward flight of the loss ratio continued with the most alarming rapidity until two years later it reached the highest recorded point—eighty-one cents on the hundred dollars! After that it fell off as rapidly as it rose, and in 1869 and 1870 showed fifty-three and fifty-four cents respectively as the fire loss on each \$100 in force. Then came the Chicago and Boston fires. The reason why the recorded losses of 1871-2 do not mount as we would naturally expect them to, is because the facts are not embodied in the department tables. One hundred companies found their fate in those dread disasters, and the history of their bankruptcy went into the court records instead of the insurance reports. It will be well to bear this fact in mind as we go on, because the same anomaly will be repeated in other charts. After 1872 the loss ratio fell to a lower point than any before recorded, reaching 45 cents in 1874 and again in 1878 settling to the unprecedented figure of 37 cents; rising again to 43, 44 and 48, where the record of 1883 closes.

An inquiry into the causes of some of these fluctuations and the lessons taught by the chart and the table on which it is built would be interesting, but I will reserve them for the the next diagram and return for a moment to the astonishing fact of the fluctuation itself, which, as between 1878 and 1866, exhibits the incredible deflection of one hundred and nineteen per cent.! The majestic sweep of the figures which express the aggregate writings of the companies, say a billion and a third, a quarter of a century ago, to upward of nine billion last year and probably ten billion this, would seem to justify the expectation of a steady, uniform annual yield of losses with an undulation perhaps for Chicago and Boston, but no sharp inequalities anywhere; and the facts as they stand pinnacled before us, will compel us to reconstruct some of our ideas in regard to the amounts required to "make an average." Have you any adequate notion of the magnitude of a billion? A man handling silver dollars one at a time, three per second (a rate quite as fast as an expert teller could maintain continuously), eight hours per day, six days per week, would require thirty-seven years to get through a billion of them! The entire membership of this Association could not count in a year the silver dollars expressed in the annual writings of the companies with which you are connected!

Before leaving this diagram (and I think I can safely promise not to detain you so long before any one of the others), let me call your particular attention to the general trend of the track of the percentage expressed; it is downward, as you will observe, and means that the property on which our policies are now and have for the past ten years been written, is better than it was. The average loss to risks in force for twenty-four years was fifty-two cents. Before 1874 the ratio was above, largely above, that average figure; since 1874 it has been below, largely below. I say *largely*, because the increasing business throws nearly seventy per cent. of the

total writings of the twenty-four years within the last decade. In just what proportion this favorable result is to be credited to improved buildings, schedule ratings, better fire departments, enlarged water supplies, fire telegraphs, automatic alarms, sprinklers, stand-pipes and other mechanical devices, increased intelligence among the owners of special hazards and improvements in their risks, greater skill and conservatism among insurance men themselves and the corresponding benefits of selection of risks, the lessons of self-protection and mutual interest inculcated, as well as the general spread of technical knowledge by the insurance press, are details into which my limited time will not permit me to go. Doubtless all these things have been potent. Certain it is that the bases of the business are better, and the honest historian of fire insurance in America cannot pass by the influences enumerated or the Association before which I have the honor to stand, without naming it and them as among the important factors in the improvement. I think the proofs of this will come out with more or less distinctness as I go on.

Before proceeding with the next diagram, let me a little further describe the bases of my tables—which tables, by the way, will be entirely out of sight in this address, as delivered, but will be found in the printed copies, where I trust the persistent labor bestowed on their compilation may receive its reward of appreciative study at your hands. Instead of taking the grand totals of the “Recapitulations” found in the department reports, I eliminate the mutual and the marine figures. Both the marine and the mutual companies do fire insurance, but the nature of the risks in the one case, and the methods of business in the other, involve the danger of disturbing elements in the calculations and false conclusions from the results; so I take the figures of “our own companies,” so to speak, as being the ones in which we are immediately and vitally interested. The figures employed are those of the “New York Joint-stock Fire Insurance Companies,” and the “Fire and Fire-marine Insurance Companies of other States,” down to and including 1872. After that date the figures of the foreign fire companies are available and are added. In all those calculations, however, which include capital stock, dividends, surplus and some other items, the figures of American companies only are employed, for obvious reasons.

TABLE No. 2.

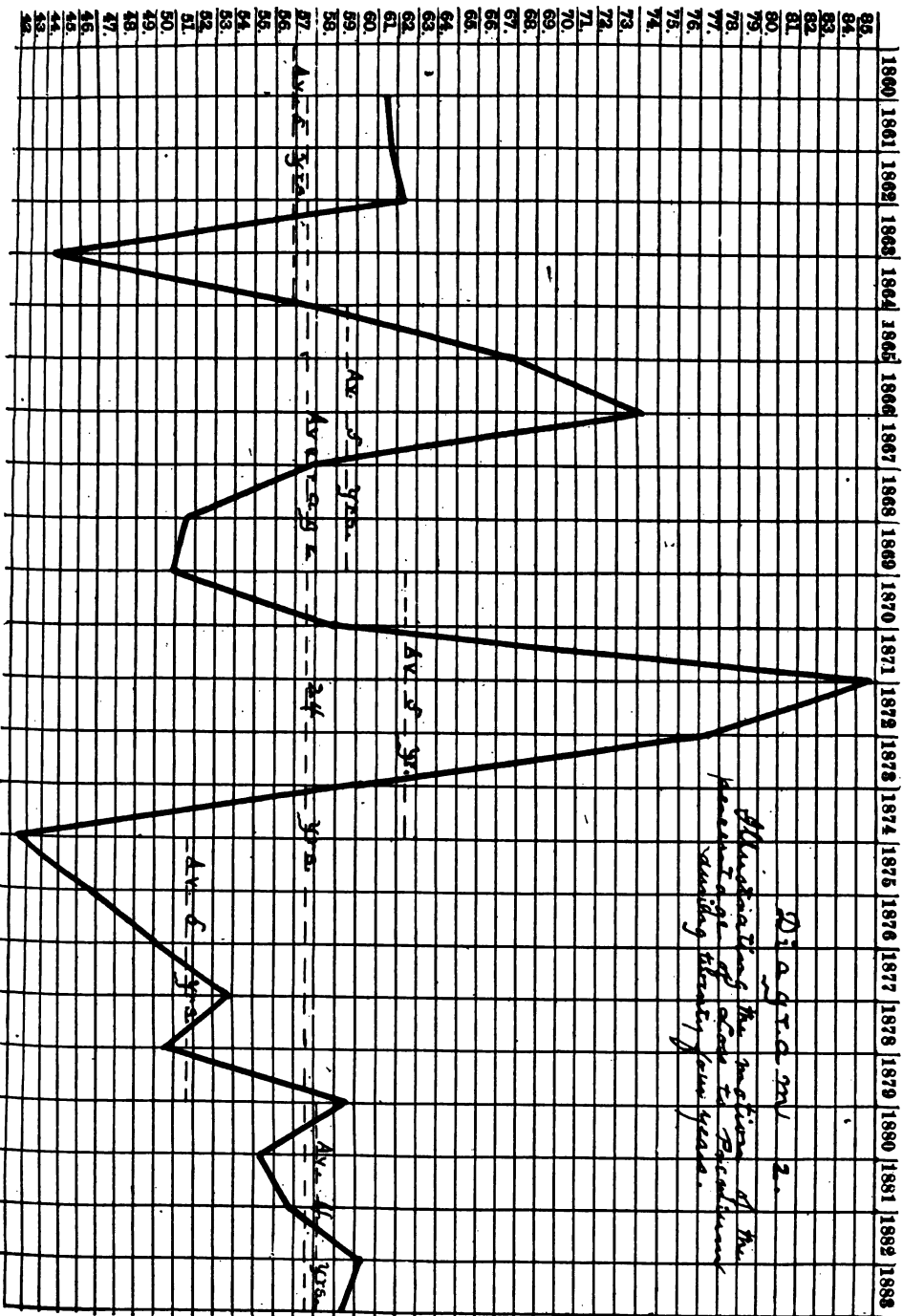
Table showing Fire Premiums, Fire Losses, and the Percentage of Loss to Premiums for Twenty-four Years.

YEAR.	Fire Premiums.	Fire Losses.	Loss to Premiums.
1860.....	\$13,750,761	\$8,450,969	61.46
1861.....	12,400,644	7,665,985	61.82
1862.....	13,404,596	8,341,380	62.23
1863.....	16,414,223	7,321,444	44.60
1864.....	23,843,521	13,705,890	57.41
1865.....	25,419,588	17,264,617	67.92
1866.....	32,281,404	23,913,745	74.08
1867.....	36,647,695	21,169,632	57.77
1868.....	37,895,740	19,283,978	51.52
1869.....	39,353,578	20,054,341	50.96
1870.....	37,287,621	21,869,440	58.73
1871.....	36,821,051	31,617,273	85.87
1872.....	43,519,321	33,728,763	77.50
1873.....	62,818,069	37,731,633	60.06
1874.....	61,645,202	26,199,312	42.50
1875.....	59,285,105	27,695,628	46.72
1876.....	54,302,706	27,148,687	50.00
1877.....	50,891,012	27,467,852	53.97
1878.....	46,139,125	23,261,969	50.42
1879.....	48,327,641	28,787,630	59.57
1880.....	53,899,092	29,772,356	55.22
1881.....	61,050,596	34,712,071	56.86
1882.....	67,673,348	40,682,025	60.10
1883.....	75,593,477	44,893,676	59.39
	<u>\$1,010,115,116</u>	<u>\$582,740,296</u>	<u>57.69</u>

Fire Premiums, Fire Losses, and the Percentage of Loss to Premium for periods of Five years.

YEAR.	Fire Premiums.	Fire Losses.	Per- centage.
1860-1864.....	\$ 79,813,745	\$ 45,485,668	56.99
1865-1869.....	171,098,005	101,686,313	59.43
1870-1874.....	242,041,264	151,146,421	62.45
1875-1879.....	258,945,589	134,361,766	51.89
1880-1883.....	258,216,513	150,060,128	58.10
	<u>\$1,010,115,116</u>	<u>\$582,740,296</u>	<u>57.69</u>

DIAGRAM ILLUSTRATING TABLE NO. 2.—LOSS TO PREMIUM.



## LOSS TO PREMIUM.

The second diagram resembles the first very closely, although one of its factors was drawn from a wholly different source. It shows us the track of the percentage of Loss to Premium for twenty-four years, and demonstrates, as all research demonstrates, that loss is the one great brutal force, uncontrolled and uncontrollable, which governs and lords it over and dominates every other factor of the business. This will appear more clearly further on, when I exhibit a larger diagram, on which all these lines are placed so as to show their bearings upon and relations to one another. The chart now before you has to do with an element which causes practical fire insurance men more anxious thought than perhaps any other. When the loss largely exceeds 50 per cent. of the premium, there is trouble. Latterly, however, we have become accustomed to think of 60 per cent. as a normal figure, and do not indulge special worry until that proportion is passed. In 1860-61, 50 per cent. was regarded as the safety limit, and the loss ratio was well above it; this was when the civil war was opening, and both confidence and values were disturbed. The ratio continued between 61 and 63 per cent. for three years. During this period the resources of the country were largely drawn from domestic industries by the war, which had assumed its most serious proportions in 1863, when the fire loss fell off to 44 per cent. of premiums. An era of wild speculation quickly succeeded and continued during the following years, when, in 1866, the fire loss rose enormously, reaching 74 per cent. of premiums. This fell off rapidly, and from 1867 to 1870 kept below 60, and in 1869 below 51. Then came the Chicago and Boston fires. The gradient which represents those losses is due to physical causes; two great cities burned, and the disasters were of such magnitude as to become themselves causes rather than results. We need not stop to speculate upon them here. Jay Cooke's failure occurred in 1873, and inaugurated the tedious depression which ensued. These financial and business movements of the country seem to have been followed in a rough way by the lines of these charts, but with this curious contradiction of the generally received notion, that depressed business and falling values mean high fire losses. In 1862-63 we reached the darkest days of the war of the Rebellion, and the fire loss fell to 44.60 per cent. of premiums! With returning prosperity the fire loss rose, in 1866, to 74.08! In 1873 began the longest and most widespread period of business stagnation that has come over the country during the present generation, and the fire loss fell to the lowest recorded point in 1874—42.50 per cent. of premiums! It may be very difficult to account for these facts upon any of the theories current in our craft, but there stand the facts nevertheless, and it is possible that we may yet have to acknowledge that speculation and inflation are worse enemies of insurance than business misfortune or general bankruptcy. I would not be sorry to see that postulate demon-

strated, for I love to think of insurance as growing on the *good* side of civilization; I love to think of its aims as noble, its methods as high and honorable, and its results as beneficent. Therefore, to ascertain, as I think we do ascertain through this exhibit, that speculation, which is confessedly the deadliest foe of legitimate business enterprise, is also the deadliest foe of insurance, proves the close kinship between insurance and that which is most exalted in business life.

Please observe that the lines in this chart keep fairly down during the later years, and maintain a much more steady course. The trend is upward since 1874, but only once in ten years has the percentage of loss to premiums touched 60. The average for the past four years is 58.10, and for the five years before that, 51.89. This in itself is not a bad showing, and it would appear that for the past decade our general rates of premium have been tolerably well adjusted to loss. Perhaps we shall find as we go on, that there are some other items to which the premium is not adequate, and then the question may arise as to which will be better, to bring Mahomet to the mountain, or the mountain to Mahomet!

#### RATES.

We come naturally, now, to the consideration of rates (Diagram No. 3), and it will be interesting again to note how faithfully the lines of these diagrams follow the one controlling, irresistible power which underlies them all—loss! From 1860 to 1863 the loss ratio fell off 17 cents; two years later the rate had followed on the down grade ten cents, reaching in 1865 the lowest recorded point, 74 cents. Then came the sharp rise in losses in 1865–66, and the rate obediently followed, reaching, in 1867, the very satisfactory point of 95 cents—an advance on itself of 28 per cent. in two years. Then followed the more moderate losses of 1867–8–9–70, and the premium—less flexible, to be sure, and lagging a couple of years behind—described a curve corresponding to the track of its tyrant master. It took the rate two years from the Chicago fire to reach its maximum, which occurred in 1873, when it marked the highest recorded point, 1.10. From that date, for seven long years, the road led down into the valley, checking up at 86, in 1878–79, but dropping one cent more in 1880, when the lowest recent figure was reached—85 cents. From that time to the present, prices have been on the mend, and the record of last year closed at what would seem to be a paying rate for the average risk, 97 cents. It is easy to see that the trend of the rate during the quarter-century has been upward, and it is a satisfaction to think that the general inclination runs inversely to that of the loss line; the price appears to be better maintained than it was, and the risks written not so fiery as they were. We seem to be not only not burning our candle at both ends (so far as this aspect of the business is concerned), but we are, on the contrary, apparently getting more money for better risks!



TABLE No. 3.

Table showing Fire Risks written, Premiums charged thereon, and the Percentage, or Rate of Premium charged, for Twenty-four Years.

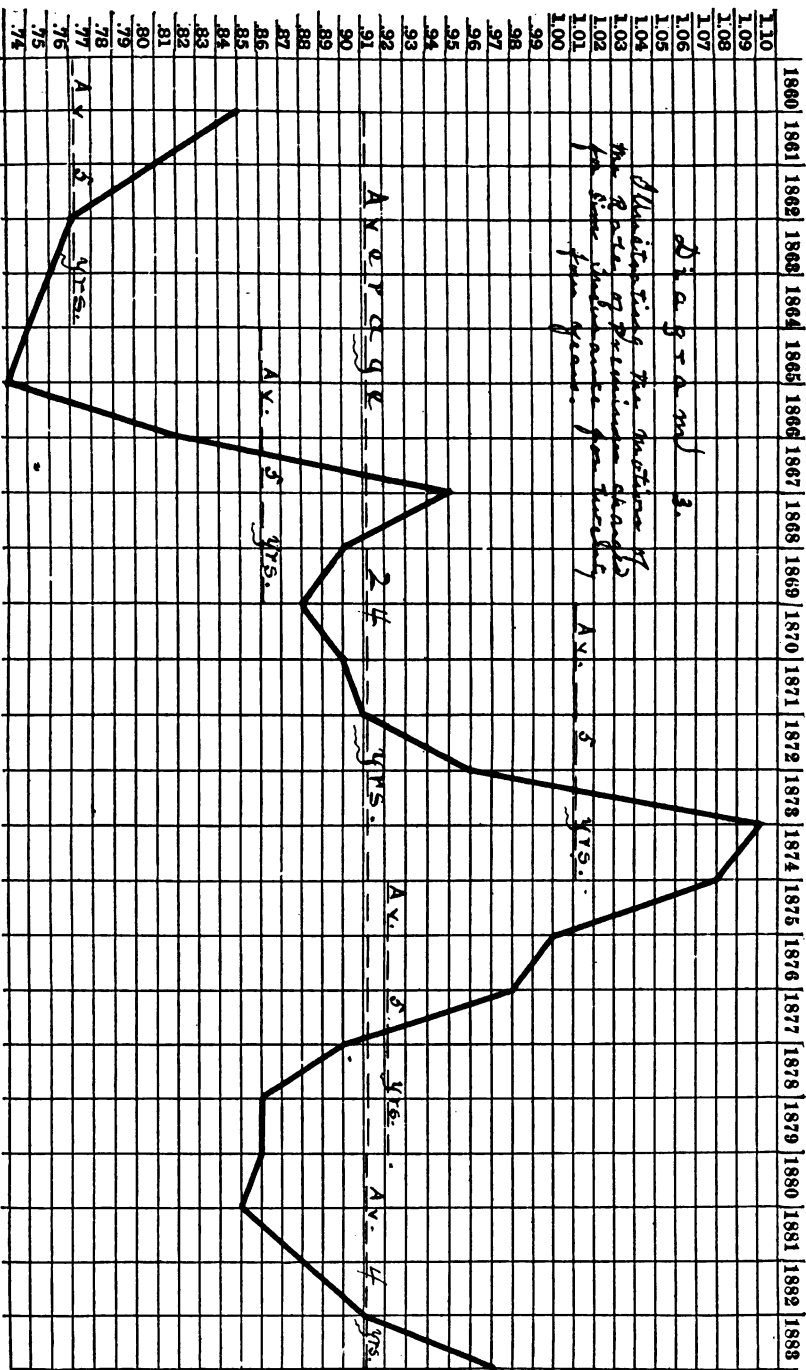
YEAR.	Fire Risks Written.	Premiums Charged.	Rate.
1860.....	\$1,617,439,266	\$13,750,761	0.85
1861.....	1,590,019,234	12,400,644	0.81
1862.....	1,729,988,571	13,404,596	0.77
1863.....	2,150,200,797	16,414,223	0.76
1864.....	3,166,532,903	23,843,521	0.75
1865.....	3,428,105,222	25,419,588	0.74
1866.....	3,930,048,320	32,281,404	0.82
1867.....	3,850,536,204	36,647,695	0.95
1868.....	4,169,495,474	37,895,740	0.90
1869.....	4,454,808,663	39,353,578	0.88
1870.....	4,509,617,329	40,688,295	0.90
1871.....	4,160,365,984	38,034,432	0.91
1872.....	4,834,648,371	46,495,961	0.96
1873.....	6,239,451,278	68,759,837	1.10
1874.....	6,273,350,082	67,734,661	1.08
1875.....	6,466,962,345	64,845,321	1.00
1876.....	6,148,944,283	60,065,620	0.98
1877.....	6,273,400,898	56,570,671	0.90
1878.....	6,133,133,227	52,583,021	0.86
1879.....	6,446,558,571	55,168,284	0.86
1880.....	7,107,706,945	60,638,881	0.85
1881.....	7,915,655,717	69,809,053	0.88
1882.....	8,712,254,402	79,465,794	0.91
1883.....	9,335,702,025	90,779,180	0.97
	<hr/> \$120,589,926,111	<hr/> \$1,102,550,761	<hr/> 0.91

Risks written, Premiums charged and average Rate for periods of Five Years.

YEAR.	Fire Risks Written.	Premiums Charged.	Rate.
1860-1864.....	\$10,194,180,771	\$79,813,745	0.78
1865-1869.....	19,832,993,883	171,098,005	0.86
1870-1874.....	26,017,483,044	261,713,186	1.01
1875-1879.....	31,473,999,324	289,232,917	0.92
1880-1883.....	33,071,319,089	300,692,908	0.91
	<hr/> \$120,589,926,111	<hr/> \$1,102,550,761	<hr/> 0.91

I beg you to remember that the figures which I am presenting are comparative, rather than exact; that is, when I say that in 1883 the gross amount of risks written was \$9,335,702,025, and the premiums charged thereon were \$90,779,180, and that, therefore, the rate was 0.97, I mean that that was the percentage of the one on the other. I am aware that short-term business and long-term business, cancellations, re-insurances, expirations, etc., come in to render that statement inexact as an expression of the average rate actually charged on annual risks; but the state-

DIAGRAM ILLUSTRATING TABLE NO. 3.—RATE OF PREMIUM.

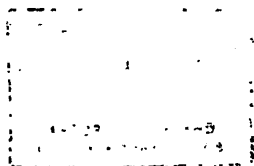


ment, properly understood, is a fair one for our purposes, because it is made for comparison with the figures of twenty-three other years, which are derived from the same factors. The unfavorable bearings of the inadequate long-term rate will appear further on, in connection with a chart illustrating the movement of that business; but, if I should leave you at this point, without saying that the constant increase of term-risks at rates shockingly reduced from the proper multiples of the annual, is exercising an influence as baleful as it is subtle, I would leave you with a wrong impression. The rate is really not so good as it seems, and that remark increases in emphasis from 1860, when less than six per cent. of the writings were term, to 1883, when nearly 41 per cent. were term.

#### SURPLUS.

We appear to find the losses less and the premiums greater. If these things are so, there must have been accumulation, and that accumulation must be accounted for. An inquiry into the motion of the surplus and the dividends will, therefore, be in order at this point, and the diagram (No. 4, see opposite page), now shown illustrates the motion of those two items, so vital to the prosperity of insurance companies. The eye is immediately arrested by the magnificent form of the surplus line, and I am tempted to stop and express the pride I feel in being associated with a business which has such superb recuperative powers within itself.

The potent influence of the master power is shown again in the line before us. As the loss ratio fell in 1863, the surplus rose to meet it the following year; but, with the heavy losses of 1866, the surplus fell by a line which corresponds almost exactly in its inverted shape with the loss line of the same period. This sympathy finds expression all the way across the chart. In 1869 the losses had fallen again to 51 per cent. of premium, and the surplus rose in immediate response to 38 per cent. on capital, an advance of three hundred per cent. from the "low days" of three years before! Again, the Chicago and Boston fires sent the losses skyward, and the surplus again fell to the depths, reaching the low point of 9.68 per cent. in 1872. From that time onward, however, the upward flight of the surplus line was literally precipitous, carrying the average of the quarter-century up to 42 per cent. of capital, but keeping so far above that average as to make its indication on the chart appear like a watermark on the side of an immense mountain. The little four millions of 1872 have changed to the thirty-seven millions of to-day, and the insufficient 9.68 per cent. to the ample 65.37. The highest point reached was in 1880, when the unprecedented percentage of surplus on capital was 73.82, almost 74 per cent. Quick to respond to the motion of the loss ratio, which has been upward during the past three years, the surplus has fallen correspondingly during the same period. This will appear more distinctly on the large chart, where these lines will be combined for comparison with one another.



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TABLE No. 4.

Table showing Amount and Percentage of Surplus and Dividends to Capital, for  
Twenty-four Years—American companies only.

YEAR.	Capital.	Surplus.	Per- centage.	Dividends.	Per- centage.
1860.....	\$29,998,760	\$ 8,297,710	27.66	\$3,836,141	12.79
1861.....	29,384,260	6,817,651	23.20	3,260,749	11.10
1862.....	29,834,260	7,530,624	25.24	3,324,566	11.14
1863.....	33,246,760	8,907,661	26.79	3,567,331	10.73
1864.....	41,629,945	12,136,849	29.15	4,141,878	9.95
1865.....	46,398,146	6,899,331	14.87	4,616,606	9.95
1866.....	45,796,428	4,384,691	9.57	3,369,249	7.36
1867.....	50,458,890	8,722,855	17.29	4,182,326	8.29
1868.....	51,078,218	13,350,107	26.14	5,051,795	9.90
1869.....	51,118,602	19,583,847	38.31	6,252,779	12.23
1870.....	52,732,333	18,779,282	35.61	6,509,998	12.35
1871.....	43,757,020	11,938,519	27.29	4,833,691	11.05
1872.....	43,177,516	4,179,321	9.68	3,203,404	7.42
1873.....	50,337,065	13,133,287	26.09	4,204,715	8.35
1874.....	53,052,190	23,687,379	44.65	6,756,220	12.75
1875.....	55,883,110	30,255,988	54.63	7,450,232	13.45
1876.....	56,623,440	33,031,161	58.33	7,741,760	13.67
1877.....	54,582,220	30,542,978	55.96	7,411,652	13.58
1878.....	53,342,220	34,140,065	64.00	6,692,937	12.55
1879.....	50,992,220	34,010,570	66.70	6,300,363	12.36
1880.....	49,135,020	36,269,867	73.82	5,957,992	12.13
1881.....	53,935,020	37,721,220	69.94	6,838,667	11.75
1882.....	53,065,020	36,844,612	69.43	6,035,921	11.37
1883.....	56,465,020	36,911,284	65.37	6,238,942	11.05
	\$1,135,523,183	\$478,076,809	42.10	\$127,279,409	11.21

While we must rejoice in the recuperative power which makes it possible thus to strengthen the things which remain, we must not forget the sad loss of capital and surplus which was encountered by the hundred companies crushed in the great fires of 1871-2, and double that number that have fallen by the way elsewhere during the quarter-century under consideration. Two hundred and seventy-two companies have ceased to do business in New York since 1860 dawned! Of these a few still exist. The long list includes most of those of any prominence that have stopped, but it is probable that enough others have bitten the dust in the same period to make 300 or more companies lost. If these sunk even \$200,000 each, the sum of \$60,000,000 lost (nearly one-half the entire dividends realized in that long period), must be engraved on their monument; and this does not take into account the large sums put up by stockholders to make good the losses in the great fires, nor the countless failed mutuals all over the country, whose victims are legion and whose losses are quite out of the reach of ascertainment, and almost beyond computation. Oh, no! insurance history at large cannot be written *couleur de rose*. There has, indeed, been "something the matter" with it, and doubtless still is. Perhaps we shall find out, partially, at least, what it is before we get through.

## DIVIDENDS.

The modest wave line at the bottom of this chart marks the road which the dividends have traveled since 1860. They have not been extravagant at any time, and during some of the years have been very light when contrasted with the risks which the capital has had to run. In 1860, we were paying 12.79 per cent. This figure, in obedience to the controlling influences before described, fell steadily for six years, reaching 7.36 in 1866, but rising again, as its fiery master permitted it, until 1870, and again descended to a minimum in 1872, and then struggled up to a more satisfactory point in 1875, and for three years held its own above 13 per cent., the maximum, 13.67, being reached in 1876. From that date to this the declension has been steady and unbroken, although at no time during the last ten years has it fallen below 11 per cent. This persistent down grade of dividends, with the increased power of the companies to pay them, as indicated by the heavy rise in surplus, is anomalous, and indicates that the minds of officers are not settled in regard to the limit where the accumulation of surplus should cease. In view of the erratic motion of the loss line, it may be rash to say that there is any such limit, and yet it is obvious, mathematically so at least, that a large and well-managed company does not need so great a percentage of surplus as a small and experimental one, and it would seem unreasonable, therefore, that stockholders of the former class should keep much more than a dollar and a half in bank for each dollar of stock owned. This, however, is a matter of managerial responsibility, which we may safely leave with the officers and directors of the companies. I would remark that the gentle undulations of this dividend line are quite as significant as the more violent leaps of the others; the difference between 7.36 and 13.67—the highest and lowest percentages of dividends indicated—is a difference of 85.73 per cent., and whether a man is receiving \$100 or \$185.73, makes all the difference in the world with him! One more remark in this connection, which is this: Do not draw the conclusion from my table that fire insurance stocks pay about eleven and a quarter per cent. on the average anyhow, and so the average stockholder is very well cared for. These figures are derived from the companies that have lived and not died. If you wish to know how the *average* stockholder has fared, call the long roll of the dear departed, put their disasters in the pool with these successes and you will find the general result to be watered so exceedingly thin as to have lost nearly all its nutritive qualities. Fire insurance stocks in the aggregate have not paid six per cent. If there were any way of doing it without attracting a multitude of competing experimentalists into the field, I would be glad to see the dividends on fire insurance stocks doubled. Some of the money which ought to go in this direction now goes elsewhere, and that is one of the partial answers to the inquiry about what the matter is, that I have

been able to develop in the course of my investigations. We will come to it presently.

ANALYSIS OF GROSS EXPENDITURES.

I know that some of you will smile when I tell you that the chart now shown (No. 5, next page) is an analysis of the gross expenditures of the companies! What pertinency is there, you will say, in the percentage to total expenditure, of loss, expense and dividend? You want to know the relations of loss and expense to premium, and the relations of dividends to capital, but how can it profit to know the relations of these three to one another? I recognize the orthodoxy of the objection, but think, nevertheless, that it will not be unprofitable to study these things from another point of view; indeed, it is always profitable in every business to know where the money goes to and what proportion of it goes to this and that object.

Insurance companies pay out money for three things. Whatever the subdivisions may be they are all finally resolved into loss, expense and dividend, and these lines show just how these three channels of outlay have been running for the past twenty-four years. You will observe the dominating influence of the loss line again! As that goes up the others go down, and *vice versa*. In this chart, however, the movement of the lines is synchronous and exact. At each perpendicular, clear across the sheet, the three percentages added together make exactly a hundred, the lower two advancing and retreating, somewhat irregularly in regard to each other, but with a combined movement which yields precisely that fraction of a hundred needed to match the fraction expressed by the line above. Take the point where they are all nearest together, for example, 1863, and you will find that loss 47.48, dividend 23.13, and expense 29.39, make just 100.00. A like result is found on the line where they are farthest apart, 1872, where loss 67.08, dividend 5.88, and expense 27.04, make 100.00, and so at each of the twenty-four perpendiculars. This is of no importance whatever, and is merely shown as a matter of passing curiosity; the real gist of this chart is in the divergence of the lower two lines. Please observe that in 1860 we actually paid a larger amount of money by some \$86,000 for dividends than we did for expenses, and so, of course, a larger per cent. of gross expenditure. The dividend line on this chart starts just above the expense line, but those lines parted company early in 1861, and have never been near neighbors since, the one settling down to a position of chronic subordination, while the other has as persistently asserted its superior importance. Lines drawn from the points of beginning in 1860 to the points of ending in 1883, describe two sides of an isosceles triangle, which leave nearly the whole of the dividend track below and nearly the whole of the expense track above! While the loss line for the past ten years has not once been up to the average of the



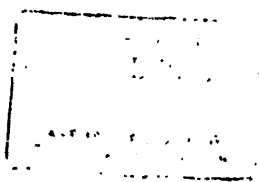
twenty-four, the dividends have never, since 1864, even approached the position of the first five years, and for the last five have run decidedly below the average of the twenty-four, and the expense line has never once been so low as the point of beginning, but from that day to this, with Excelsior for its motto, has sturdily trudged the up grade of self-assertion, making an advance upon itself of nearly 43 per cent., while the dividend of 1883, as compared with that of 1860, has made a shrinkage upon itself of more than 55 per cent. Gentlemen, there is something the matter, and we are approaching one seat of the trouble. Students of the profession have come at it a great many times before us; we have made no new discovery, but are merely exhibiting it through a diagram which appeals to the eye—traveling over an old road in a new coach and four, so to speak.

Before passing on to the next chart, let me say, in order to avoid being misunderstood, that all the figures I have given in connection with this one are derived from itself; that is, I have spoken of loss, dividend and expense as the components of gross expenditure and of their relations to one another in that connection only.

TABLE No. 5.

Analysis of Gross Expenditures, Showing the Amount and Percentage of Losses, Dividends and Expenses, for Twenty-four Years—American Companies only.

Year.	Gross Expenditures.	Losses F. & M.	Per-centage.	Divi-dends.	Per-centage.	Expenses.	Per-centage
1860.....	\$16,087,060	\$8,450,969	\$52.69	\$3,886,141	23.92	\$8,749,950	23.89
1861.....	14,424,886	7,665,985	53.14	3,260,749	22.61	3,498,152	24.25
1862.....	15,259,304	8,341,380	54.66	3,324,566	21.79	3,593,358	23.55
1863.....	15,420,520	7,321,444	47.48	3,567,831	23.13	4,531,745	29.39
1864.....	24,789,706	13,705,890	55.28	4,141,373	16.71	6,942,448	28.01
1865.....	34,833,201	20,687,033	59.39	4,616,606	13.25	9,529,562	27.36
1866.....	45,239,132	29,934,689	66.17	3,369,249	7.45	11,935,194	26.38
1867.....	43,619,667	26,057,103	59.74	4,182,326	9.59	13,380,238	30.67
1868.....	41,882,753	23,456,145	56.68	5,051,795	12.21	12,874,813	31.11
1869.....	45,178,718	24,001,570	53.13	6,252,779	13.84	14,924,369	33.03
1870.....	47,587,618	25,949,328	54.53	6,509,998	13.68	15,128,292	31.79
1871.....	52,653,987	31,757,637	66.01	4,833,691	9.19	13,062,659	24.80
1872.....	54,476,576	36,543,739	67.08	3,203,404	5.88	14,729,433	27.04
1873.....	56,058,771	34,685,874	61.88	4,204,715	7.50	17,168,182	30.62
1874.....	49,823,225	25,408,331	51.00	6,756,220	13.56	17,658,674	35.44
1875.....	51,751,527	26,557,357	51.31	7,450,232	14.40	17,743,938	34.29
1876.....	50,240,134	25,212,306	50.19	7,741,760	15.40	17,286,068	34.41
1877.....	48,700,831	25,402,962	52.16	7,411,652	15.22	15,886,217	32.62
1878.....	42,329,803	20,974,511	49.55	6,692,937	15.81	14,662,355	34.64
1879.....	45,484,894	24,418,537	53.68	6,300,363	13.86	14,765,994	32.46
1880.....	46,786,197	25,279,298	54.03	5,957,992	12.74	15,548,907	33.23
1881.....	50,841,030	27,503,525	54.09	6,338,667	12.47	16,998,833	33.44
1882.....	52,726,584	29,418,710	55.79	6,035,921	11.45	17,271,953	32.76
1883.....	58,604,990	32,797,512	55.96	6,238,942	10.65	19,568,536	33.89
	\$1,004,251,114	\$564,531,835	56.21	\$127,279,409	12.67	\$312,439,870	31.12



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ANALYSIS OF EXPENSE.

In the last table, both fire and inland losses were used, and in this one (No. 6, see next page), both fire and inland premiums are given. This is rendered necessary by the fact that dividends are paid from both, and there is no separating of these, or of salaries or taxes, in the reports, showing what proportion belongs to fire and what to marine. I am, therefore, compelled to deal with a factor of which I would gladly be rid, and which I am fearful may blunt the edge of some of my conclusions; but I see no way out of the difficulty, and it is, after all, not a fatal one.

After the arraignment of the Expense line in the last diagram, it becomes necessary to analyze that item, and ascertain, if possible, what the matter is with it. The expenses of the companies are tabulated in the Reports under four headings: Commissions, Salaries, Taxes and Miscellaneous, and the lines on the chart now before you show the course of those four streams of outlay since 1865—these divisions not appearing in the earlier Reports. The percentages are on the premiums received.

Obviously, the difficulty does not rest with taxation, which has fallen off since the war taxes ceased, from 6.02 of premiums to 2.57 per cent., or considerably more than one half, and has been above 3 only twice in the last dozen years.

The miscellaneous column, which, for reasons quite different from those ascribed to charity, is supposed to cloak a multitude of sins, has not grown alarmingly in wickedness during the nineteen years tabulated, being to-day 7.76, as compared with 6.83 in 1865, an increase of only 0.83, and has run down steadily from the maximum 8.97, reached in 1876. Neither the fluctuations of this line, nor its general trend, furnish any cause for uneasiness.

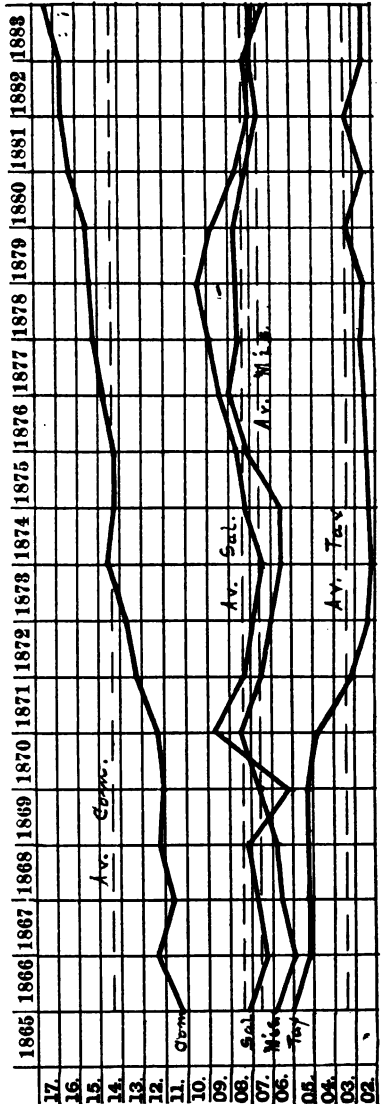
The salaries likewise, while a little jerky in 1868, '69 and '70, have behaved themselves with remarkable decorum, and were less in 1883 than they were nineteen years ago, having been on the down grade since 1878, when they touched the maximum of 10.34 per cent. of premiums.

TABLE No. 6.

Analysis of the Expense Column in Table No. 5, 1865-1888, the subdivisions not being obtainable prior to 1865.

YEAR.	Premiums F. & M.	Com- missions.	Per- centage.	Salaries.	Per- centage.	Taxes.	Per- centage.	Mis- cellaneous.	Per- centage.
1865.....	\$29,608,240	\$3,323,686	11.23	\$2,401,339	8.11	\$1,788,747	6.02	\$2,020,782	6.83
1866.....	38,867,491	4,805,407	12.36	2,812,866	7.24	1,996,588	5.13	2,821,327	5.97
1867.....	42,408,126	4,989,683	11.76	3,339,620	7.87	2,222,102	5.24	2,828,875	6.67
1868.....	48,023,947	5,223,945	12.14	3,469,954	8.07	2,290,422	5.32	2,890,485	6.72
1869.....	45,024,144	5,430,261	12.06	2,755,492	6.12	2,376,686	5.28	3,361,972	7.47
1870.....	42,593,064	5,248,743	12.32	4,160,023	9.77	2,108,941	4.95	3,610,579	8.48
1871.....	40,747,287	5,414,825	13.29	3,947,783	8.22	2,270,848	5.58	3,029,252	7.43
1872.....	47,380,547	6,562,516	13.85	3,729,154	7.87	1,128,329	2.38	3,314,428	7.00
1873.....	56,405,494	8,154,241	14.46	4,141,191	7.34	1,202,781	2.13	3,669,968	6.51
1874.....	56,489,701	8,016,736	14.19	4,588,421	8.11	1,277,474	2.26	3,781,037	6.69
1875.....	52,782,970	7,562,906	14.33	4,564,649	8.65	1,906,358	3.65	4,310,019	8.17
1876.....	46,123,987	7,184,202	15.37	4,501,912	9.36	1,284,705	2.67	4,315,244	8.97
1877.....	43,778,361	6,640,873	15.17	4,827,216	9.88	1,187,128	2.71	3,780,995	8.52
1878.....	39,420,817	6,060,823	15.37	4,076,865	10.34	1,026,244	2.60	3,496,383	8.70
1879.....	39,490,270	6,144,242	15.56	3,873,721	9.81	1,311,642	3.32	3,581,873	8.70
1880.....	43,745,016	7,108,546	16.24	3,761,934	8.60	1,101,546	2.52	3,735,420	7.89
1881.....	47,356,526	7,916,265	16.72	3,784,549	7.99	1,562,596	3.30	3,903,231	7.99
1882.....	48,839,994	8,112,256	16.61	3,950,308	8.09	1,306,153	2.67	4,338,654	7.76
1883.....	55,897,664	9,679,402	17.32	4,112,162	7.36	1,438,312	2.57		
	\$861,973,666	\$123,574,008	14.34	\$71,694,109	8.32	\$29,176,547	3.38	\$65,679,436	7.62

DIAGRAM ILLUSTRATING TABLE No. 6.—EXPENSES.



You have been watching this top line while I have been talking about the others, and you have done well, for it is the one thing in this part of my exhibit which needs watching, and I trust you will not take your eyes off it until you have fully comprehended its importance, nor your minds until you have devised some efficient means for changing its course, so far as it may fall within the province of fieldmen and general agents to take action on that point.

This line tells the truth, but not the whole truth so far as fire insurance is concerned. Its complication with inland, and the fact that the practice of figuring rebate on the face of the policy and carrying out the net instead of the gross premium is quite general, and the further possibility of lumping portions of agency expenses into miscellaneous, make it almost certain that if the separate and complete facts touching commissions on fire premiums could be ascertained and diagramed, this line would show a much steeper grade than it does. No one doubts that in 1865 we were paying more than 11.23; in 1883 more than 17.32, and for the whole nineteen years an average of more than 14.34, and yet those are figures which the department reports furnish us. But the significance of this line is its persistent upward movement; at no point has it been so low as at the beginning, nor so high as at the ending, but with scarcely a variation, it has held its own against all obstacles, and while other items of expense have varied and sometimes gone down appreciably, commissions have serenely advanced in all weathers! The simple structure of this line, and the short space through which it rises, as compared with the tremendous vibrations of some of the others exhibited, must not be permitted to deceive us. When we compare the two ends of the line with each other, we find that it has made the large advance upon itself of 63.13 per cent.; the advance last year upon the year before being 4.27. I do not mean 4.27 on premiums, but the per cent. of commissions upon itself. The advance on *premiums* was about 71 cents on the hundred dollars; that is, we paid out \$394,801 more for commissions in 1883 than we would have paid on the basis of the preceding year, or \$1,669,267 more than we would have paid on the basis of ten years ago, or \$3,402,095 more than we would have paid on the basis of nineteen years ago!

I do not need to insist that this is a very important matter. Many of you have given the subject more study than I, and are fully posted on all its bearings. I do not need to remark, either, that I speak of it in no spirit of hostility to agents or their interests. For many years an agent myself, and for more than thirty years in sympathy with agents and their work, I protest, nevertheless, that they are getting more than their share. I do not say that they are overpaid for the amount of work they do; I merely insist that the business is lame because so large a proportion of its income goes in that direction. The divvy is not a fair one! If the increase of commissions is normal and proportioned to the ability of the

income, then there should be a corresponding increase in salaries and miscellaneous expenses. As I figure it, Officers, Managers and Specials should be entitled to an advance of about 30 per cent. on their salaries, with large claims for back pay, in order to restore the equilibrium, and insurance journals and other miscellaneous angels of mercy and factors of good to the business, to about the same rate of advance! I say the commissions should come down or the salaries should go up.

It is past argument that commissions are abnormal, and it is perfectly well known that their present proportion is one of the outgrowths of a vicious competition. If talking would correct evils and make managements virtuous, I should expect large results from exhibits such as these, and as it is, I do not consider the labor wholly vain, for reforms finally come from agitation, and this may count as a part of the general shaking up.

#### FOREIGN COMPANIES.

Quite a number of interesting side shows came out in the course of my examinations of the department reports, one of which strikes me as of sufficient importance to claim passing attention. It is delineated on the chart (No. 7, see page 78), which I now show you, which illustrates the motion of the gross risks written in eleven years by New York State companies, other-State companies and foreign companies. The years being placed at the top, and billions and hundred millions at the side, we see that in 1860 the New York companies wrote a fraction less than three billion; other-State companies a fraction more than two billion, and the foreign companies a fraction over one billion. The curves indicate the motion of these writings since that date, showing that the two classes of American companies rose and fell in amount with a singular harmony, while the foreign companies, from 1874 onward, made a tremendous advance, the grade growing steeper and steeper until 1882, when they were covering more than one-third (37.82 per cent.) of the business reported by these three classes of companies to the New York department, but falling off slightly in 1883, while the American companies made a sharp advance in that year. Various reasons will be ascribed for these facts, according to the standpoint of the one who comments on them, but there stand the facts! One point in this connection attracted my curiosity. The difference between the gross and net premiums of the New York companies during these eleven years was 10.10 per cent.; of the other-State companies 10.12, and of the foreign companies 15.95, nearly 16 per cent., and nearly a 58 per cent. larger proportion of premiums than the American companies. The difference between gross and net is made, of course, by cancellations, expirations and re-insurances, and, as it is presumable that the former two run about evenly on the whole business of the country, the inference would be that the foreign companies had spent about \$11,000,000 (or an average of about a million

per annum) more for re-insurances than they would have done on the American basis. This may be a mere illustration of the well-known practice of those companies of accommodating customers with large policies and then protecting themselves with re-insurance. If the business has been profitable, let us hope that those eleven millions did not go out of the country. If it has *not* been profitable, let us—well, let us hope that it all came back again, and more too!

TABLE No. 7.

Fire Risks written (gross) by New York Companies, Other-State Companies and Foreign Companies for Eleven Years:

YEAR.	New York Companies.	Other-State Companies.	Foreign Companies.
1873.....	\$2,933,463,315	\$2,188,228,509	\$1,117,759,454
1874.....	3,052,325,558	2,168,641,806	1,052,382,718
1875.....	3,068,314,354	2,272,455,653	1,126,192,338
1876.....	2,860,693,012	2,138,829,880	1,149,421,391
1877.....	2,788,544,980	2,050,496,527	1,434,359,391
1878.....	2,661,775,627	1,955,906,458	1,520,451,142
1879.....	2,653,807,987	1,932,656,304	1,860,094,280
1880.....	2,869,445,653	2,057,085,731	2,181,175,561
1881.....	3,020,791,394	2,287,926,923	2,606,937,400
1882.....	3,020,769,908	2,396,700,693	3,294,788,801
1883.....	3,326,134,785	2,738,592,818	3,271,037,422
	<b>\$32,256,066,573</b>	<b>\$24,187,521,302</b>	<b>\$20,614,594,898</b>

Gross Fire Premiums charged by New York Companies, Other-State Companies and Foreign Companies for Eleven Years:

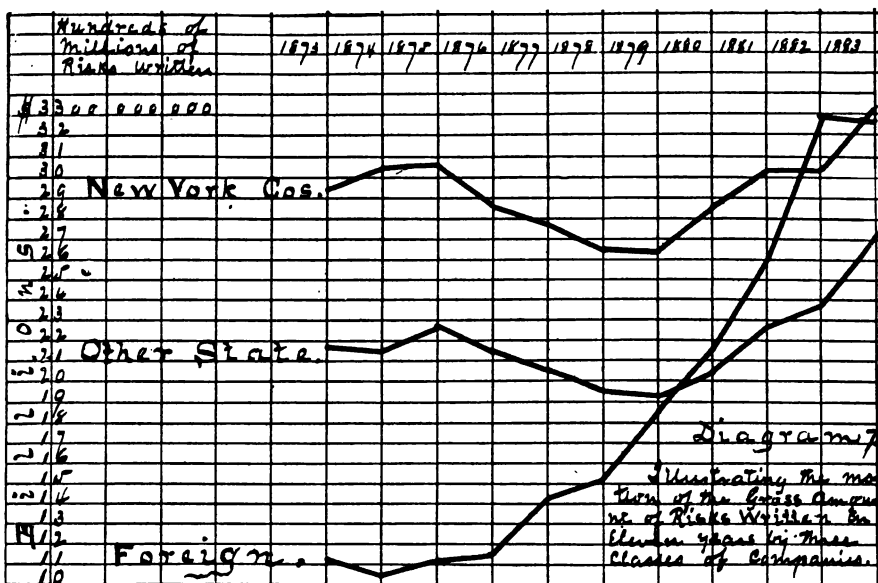
YEAR.	New York Companies.	Other-State Companies.	Foreign Companies.
1873.....	\$25,056,068	\$31,335,036	\$12,368,733
1874.....	25,935,114	30,130,971	11,668,576
1875.....	24,522,894	28,458,975	11,808,452
1876.....	22,012,084	26,324,282	11,729,254
1877.....	20,421,875	22,757,617	13,391,179
1878.....	18,646,462	20,298,788	13,637,771
1879.....	19,847,877	19,578,223	15,742,184
1880.....	21,604,261	20,719,342	18,315,278
1881.....	23,765,446	23,477,248	22,566,359
1882.....	23,718,562	25,850,198	29,897,034
1883.....	27,533,464	30,996,128	32,249,588
Total 11 Years.....	<b>\$253,064,107</b>	<b>\$279,926,808</b>	<b>\$193,369,408</b>
Net Premiums 11 Years.....	<b>227,515,963</b>	<b>251,586,744</b>	<b>162,522,666</b>
Expirations, Cancellations, Re- insurance.....	<b>\$25,548,144</b>	<b>\$28,340,064</b>	<b>\$30,846,742</b>

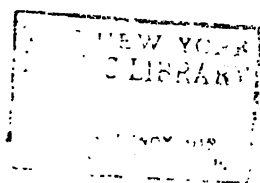


Net Fire Premiums received by New York Companies, Other-State Companies and Foreign Companies for Eleven Years—1873-1883:

YEAR.	New York State Co.'s.	Other-State Companies.	Foreign Companies.
1873.....	\$23,552,748	\$28,461,976	\$10,808,345
1874.....	23,748,145	27,345,680	10,556,877
1875.....	22,465,116	26,011,517	10,808,472
1876.....	20,061,176	23,892,209	10,349,321
1877.....	18,549,121	20,756,041	11,585,850
1878.....	16,784,882	18,369,563	10,984,680
1879.....	17,082,319	17,689,817	13,655,505
1880.....	19,571,192	18,722,736	15,605,164
1881.....	21,226,246	20,986,025	18,838,325
1882.....	20,879,927	22,659,389	24,134,032
1883.....	23,650,091	26,741,791	25,201,595
	\$227,515,968	\$251,586,744	\$162,522,666

DIAGRAM ILLUSTRATING TABLE NO. 7.—GROSS WRITINGS OF THREE CLASSES OF COMPANIES.





1883

Ante  
Ass  
Am  
Al  
Am  
Am  
Am

RECEIVED  
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AMERICAN  
MUSEUM OF  
NATURAL HISTORY

Am

3 yr

5 yr

TABLE No. 8.

Table showing the Amount and Percentage, to Total Risks, of those having One Year or less to run, those having Three Years or less, and those having more than Three Years to run—American Companies only:

YEAR.	Total Risks in Force.	Annual.	Per cent.	Three Years.	Per cent.	Five Years.	Per cent.
1860.....	\$1,345,004,487	\$1,267,981,186	94.27	\$20,157,296	1.50	\$56,866,055	4.23
1861.....	1,258,972,728	1,178,100,881	98.19	26,170,237	2.07	59,701,610	4.74
1862.....	1,373,766,641	1,280,239,044	93.19	31,988,324	2.33	61,539,273	4.48
1863.....	1,612,361,844	1,491,075,890	92.48	58,973,713	3.85	67,812,241	4.17
1864.....	2,223,843,544	2,049,860,747	92.18	77,952,373	3.50	96,030,424	4.32
1865.....	2,564,112,505	2,319,606,719	90.46	127,117,255	4.96	117,388,531	4.58
1866.....	2,945,381,297	2,641,676,751	89.69	173,141,000	5.88	130,563,546	4.43
1867.....	3,165,666,666	2,751,062,411	86.90	256,681,812	8.11	157,922,448	4.99
1868.....	3,420,490,929	2,983,824,101	85.77	311,947,129	9.12	174,718,699	5.11
1869.....	3,778,713,296	3,155,293,622	83.50	389,132,374	10.30	234,287,300	6.20
1870.....	From 1869 onward the Tabulation of Term Business was discontinued in the						
1871.....	New York Department Reports, and the figures since that date are obtain-						
1872.....	able only by compilation from the reports of individual companies. Those						
1873.....	given below are derived from the report of Mr. Heald, President of the						
1874.....	National Board, delivered at the 1884 meeting of that body. The figures						
1875.....	below include the Foreign Companies.						
1876.....							
1877.....	5,910,406,434	4,189,336,972	70.88	1,153,770,917	19.52	567,298,545	9.60
1878.....	6,097,659,790	4,101,586,639	67.26	1,278,282,660	20.88	722,790,491	11.86
1879.....	6,543,077,665	4,340,839,068	66.34	1,427,402,890	21.82	774,835,707	11.84
1880.....	7,024,034,461	4,594,108,032	65.41	1,582,599,181	22.58	847,327,248	12.06
1881.....	7,877,287,723	4,995,230,779	63.41	1,816,872,353	23.07	1,065,134,591	13.52
1882.....	8,544,497,024	5,240,973,510	61.33	2,123,418,750	24.85	1,180,104,764	13.82
1883.....	9,401,867,503	5,564,510,013	59.18	2,424,422,884	25.79	1,412,934,606	15.08

## TERM BUSINESS.

I come now to a diagram (No. 8, see page 78½) which is perhaps one of the most suggestive of the series, although very imperfect in its construction, owing to the fact that the tabulation of the separate amounts written for three and five years was discontinued by the New York department after 1869. The fact, however, that Mr. Heald has for the past seven years taken up this labor on private account, gives us, with the ten years tabulated by our Insurance Department, a sufficient basis of ascertained statistics to enable us to draw from the motion of the term business, as delineated before you, some of the most important lessons of the hour. The upper line on this chart describes the decreasing percentage of annual risks to total risks in force, and the lower lines the corresponding increase of three and five year business. In 1860, ninety-four and a quarter per cent. of all the business reported was annual. In 1869, when the tabulation in our reports ceased, it had fallen to 83.50. In 1877, when Mr. Heald's table begins, it had got down as far as 70.88, and at the close of 1883 to 59.18. That is to say, in 1860 we were doing only 5.73 of term business, and the major part of that was five-year. In 1869, we were doing 16.50 per cent., and the three-year policies had become more numerous than the five-year.

In 1877, 29.12 per cent. of the whole business was written on policies having more than one year to run, and in 1883 this business had become 40.82 per cent. of the whole. These facts and all that they imply, are held by some of the shrewdest thinkers in the craft to embody one of the worst phases, if not the very worst phase, of difficulty which now menaces the business. The danger does not lie in the increase of term business, but in the decreased price at which it is written, and the consequent load of liability shouldered off onto the future with inadequate provision for the same.

One way to illustrate this would be to suppose term business to cease suddenly and all income from this class of risks to terminate! There would be left to run off, according to Mr. Heald's table IX,

Of two year risks.....	\$81,057,700
Of three " " .....	2,343,365,184
Of four " " .....	108,652,408
Of five " " .....	1,309,282,203

All these would have to run their full terms, minus say one year. We must, therefore, count as the future load, which will yield loss and expense but no income, the two-year business once, the three-year twice, the four-year thrice, and the five-year four times. So counting, and adding the sums of them all together, we have an enormous aggregate exceeding \$10,000,000,000 for a single year—a sum greater than the total writings of all the fire companies reporting to the State of New York! I wonder if you grasp that in its full significance?

Those who take a pessimistic view of this feature of modern fire insurance say that this tremendous burden has no visible means of support, and that it can be kept up only by the Ferdinand Ward system of financiering—mortgaging the future, paying interest out of principal, increasing the burden to secure the means of carrying it! It is written at a lower rate than the annual business, and upon a cursory view would appear to have nothing to support it beyond the year in which it is written. I do not mean that it is written at certain multiples of a lower rate, but that while the outstanding annuals shown in Mr. Heald's tables paid \$1.06, the two-year risks paid only 78 cents, the three-year 91 cents, the four-year \$1.01 and the five-year \$1.17, and that the total premiums charged on the total term amounts covered gave the average rate on the whole as one per cent. (1.0018), six cents less than the annuals!

The rates computed by Mr. Heald are higher than those I have drawn from the New York reports, but the teachings are the same. I have confined myself to the 126 American companies appearing in those reports and represented on this floor, while he has secured the figures of more than twice that number of companies throughout the country. This will probably account for the difference in the figures without impugning the accuracy of either. I had two reasons for thus limiting myself: first, it was easier; and, second, I wanted to talk about "our own companies"—*your companies*.

An analysis of Mr. Heald's figures shows that the rate per annum obtained on the whole term business outstanding January 1st, was 28 cents, and the whole question of danger or safety turns on the adequacy of that rate. Term business belongs to a class which is tolled high with commissions, and it is safe to say that when all expenses are paid, not more than 17 cents find their way to the companies. I think we may settle down on that simple statement that 17 cents, or at the most 17 and a fraction, per year is all that the term business of the country gives the companies to pay losses with! The average annual fire loss to risks in force is 52 cents on each hundred dollars (it was 48 cents last year); 17 cents is say one third of that, and if the class of business on which term policies are placed is only one third as combustible as the average, *of which itself forms about 41 per cent.* (40.82), then the 17 cents will pay the losses. If it is more than one third as combustible as the average of which itself forms more than two fifths, then its income is less than its outgo.

Just what sort of meat this Cæsar fed on in 1883 that his loss yield should be only one third as great as the average, or one quarter as great as the annuals—for that is about where the figures put it—we can only surmise. Each of you knows what sort of business *you* are placing term policies on, and each of you thinks he knows what sort his neighbors are covering. I can tell you what "the other companies" write: They write dwellings, and barns, and stables, and churches, and school-houses, and court-houses, and jails, and State houses, and prisons, and colleges, and bank buildings, and business buildings, and summer cottages, and summer hotels, and storage stores, and some classes of factories, and some kinds of merchandise, and such other risks as they please—and they are not ashamed of it! It is because the area of term hazards is enlarging that the percentage of term risks is increasing. Look at the progression for a moment; it is interesting. Mr. Heald's figures show that in

1877	term risks were	29.12	per cent. of the whole.			
1878	" " "	32.24	" " "			
1879	" " "	33.66	" " "			
1880	" " "	34.59	" " "			
1881	" " "	36.59	" " "			
1882	" " "	38.67	" " "			
1883	" " "	40.82	" " "			
1884	" " will be	42.77	" " "			
1885	" " "	44.72	" " "			
1886	" " "	46.67	" " "			
1887	" " "	48.62	" " "			
1888	" " "	50.57	" " "			

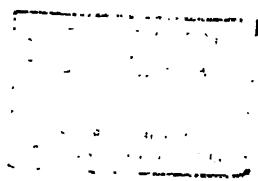
If the rate of progress does not increase beyond the average of the past seven years, we will not be writing more than half our business as term risks until about the 27th day of March, 1888.

With all these facts before you, I do not need to argue that term business as it is now conducted must bring unprofitable results. No one be-

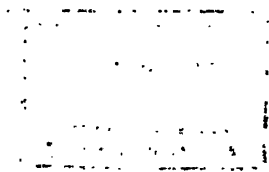
lieves that 50 per cent. or 40 per cent.—no, nor 30 nor 25 per cent.—of the risks written by the companies at large is of a character to pay losses and expenses at an annual rate of 28 cents on the hundred dollars—a figure only two cents more than one half the average annual loss rate, and this 28 cent business constitutes 41 per cent. of the mass of risks which yield that average! You will not heed me; you will go on writing this business though one rose from the dead to warn you against it; but, all the same, I believe that line runs straight down to hell! The diagram does not express the full force of the increase of term business, because the subdivision into three and five-year lines subtracts from the acclivity—the three-year being 25.79 per cent. and the five-year 15.03 at 1883; but a single line would rise through forty-one spaces, requiring a much taller diagram and would describe a much steeper grade than either of these.

I promised to say something about the subtle and baleful influences of term business on the apparent rate, but I do not think I need to go further into details. You doubtless comprehend it as well from what has been already said as you would if I should weary you with further particulars. When I say that 41 per cent. of the business of 1883 was term, and that of the \$90,779,180 premiums received about \$25,000,000 must be set over to future years, you will see that our apparent annual rate of 97 cents comes down to less than 70, a figure considerably below what we were getting twenty-four years ago, when the average was 85 cents and the term business less than 6 per cent. of the whole. This computation is based upon the essential likeness assumed between Mr. Heald's tables and the business of the New York department reports.

There is one matter, however, to which I must again advert, and that is the improved quality of the business over that of former years as brought out in the first chart exhibited. We are deceiving ourselves in regard to the average rate obtained, on account of the pestilent and secret influence of term business as above explained. We seem to be getting 97 cents, but we are actually getting only about 70. The price of our goods is really as low as it was in the terrible depression of 1863, '64 and '65, which resulted in the organization of the National Board. That was a time when it really seemed as if ruin was staring fire insurance square in the face, and that organization was born of the despondency and wretchedness which men feel when the ground is going from under them! The premium rate was down and the loss rate was up, and there was trouble! To-day the premium rate is down, but the loss rate is down also, and herein is, to my mind, the most admirable and satisfactory phase of the whole business. It is the one fact which accounts for so many of you being alive to-day; it is the one thing which stands like an Atlas under the world of pressure now weighing down fire insurance. The loss rate last year was 48 cents on the hundred dollars. The average for four years was 45 cents, and for five years prior 44 cents, but for the three quinquenniums before that, 62, 64,







and 58 cents, respectively. The loss rate of 1860, if encountered last year, would have added \$14,070,692 to the disasters which we all thought were sharp enough just as they stood. I allude to this point again, and I would be glad to give it special emphasis, because I want to commend to you and to all insurance people the conservation of all organizations and all methods which have tended to this end. Not only have you seen physical hazards improved and fire prevention extended, but you have seen systematic and successful effort made against the inroads of moral hazard, so that bad men find it more difficult to-day to procure insurance than formerly, and in many cases are they so effectively "spotted" that they cannot get it at all!

CONCLUSION.

My talk would hardly be complete if I did not fulfill my promise to show you a chart on which those lines which have relations to one another, were drawn in conjunction. I will, therefore, bring my remarks to a close in connection with the diagram (No. 9) now displayed.

An attempt of this sort is liable to produce incongruous results, because part of the lines express percentages of tenths and part of hundredths, but they are all, of necessity, drawn against one set of decimals placed along the side. It would require a sheet about twice as tall as this to place the lines in their proper relations to another.

If you were all close enough to see distinctly, your attention would be at once arrested by the group of red lines occupying the central position on this chart. They are, all three, loss lines. The heavy one is Loss to Risk, the light one Loss to Premium, and the broken one Loss to Total Expenditure. Naturally, they all follow the same general track, but the vibrations of Loss to Premium are most violent, going highest at Chicago and running with most unsteadiness since. This group of lines is the master power of the exhibit. Observe how the rate, which is the heavy line at the top, obeys it, but always a year or two behind, everlastingly trying to shut the stable door after the horse is stolen. When the loss ratio fell in 1863, the rate could not maintain itself but fell off for two years. Then came the heavy losses of 1866, and by the end of 1867 the rate rose from 74 cents to 95. Then, as the losses let down again in 1869, the downward curve of the rate showed how weak a backbone it had except under the stimulus of dire necessity. The disasters of 1871-72 evoked a response from the rate two years later, and so, all the way across the 24 years, the rate line is a crude and laggard reproduction of the loss line, with this happy general dissimilarity, that its trend is upward while that of the loss line is downward. Were it not for the lie which our subtle enemy, term insurance, gives to the inner facts, it would be literally true, as it is apparently true, that the rates have improved upward as the losses have improved downward, taking the quarter century as a whole.

The other red line represents Expense to Gross Expenditure, and is chiefly remarkable for its persistent upward wriggle; falling slightly at the disasters of 1866 and again in response to Chicago, but generally exhibiting a cheerful determination to rise in the world!

In the violent motion of the large black line below, you will recognize the track of the surplus. This line does not merely sympathize with the loss line; it follows it as a spaniel follows its master, falling as the other rises, and *vice versa*, with such precision that its lines are sometimes almost inverted duplicates of the other. It assumes a sort of superiority, however, towards the last, but even here you will observe the surplus obeys the loss and falls whenever the latter rises.

The heavy line at the bottom and its light accompaniment are Dividend to Capital and Dividend to Gross Expenditure, the second much more flexible than the other, but both obedient to the master power, as shown in the inverted position of their curves.

It is very clear from the somewhat crude, but entirely consistent harmony of these lines with one another, that they all move in obedience to a great general law, and I am, more than ever in my life before, impressed with the fact that that law is dictated by the loss ratio. Perhaps I knew it or suspected it, or thought I did, but there are a good many things which we all think we know, which we do not fully realize. Those who contend, as I have heard them contend, that Rate is King, will find an interesting study in the fact delineated here, that at the very time when the rate was at its lowest in fourteen years, the surplus was at the highest point ever attained! In view of the obvious energy and potency of loss in the control of our avocation and all that belongs to it, I suggest whether it might not be profitable to devote next year's programme largely to a general and comprehensive discussion of the question, "What can be done to control loss?" This would naturally include fire prevention, fire extinguishment, water, chemicals, and all manner of devices relating to the physical aspect of fires, as well as the large unexplored region of moral hazard.

We are controlling loss to some extent, but we need to find out how to control it better. Look again at this large red line and see how comparatively steady it has been for ten years and how far below the twenty-four year average it has remained. If we can learn how to keep it there we will prove ourselves not only better underwriters, but better citizens.

My effort to ascertain what the matter is has been only very partially successful. In view of the tremendous fluctuations of the loss line in the past and its comparatively steady course recently, we cannot ascribe our present disappointments to excessive loss, and if the rate line told the truth and nothing but the truth, its upward trend would be almost as comely as a rainbow because of the promise there would be in it. So in regard to surplus, and even dividends, the one is gratifying in the extreme while the other runs "from fair to middling," as the cotton

dealers say. Nevertheless, there is confessedly something the matter, and there is probably much the matter in other directions than the one in which I have been traveling, but my own recapitulation is short; I designate the abnormal rise in commissions—which have advanced upon themselves more than 63 per cent; this is the one thing and the only thing that ails Expense, and it ought to be reformed. Perhaps the excessive re-insurance habit of the foreign companies is a bad thing; there are, however, too many factors out of sight to make it safe to pronounce upon it. But there is no uncertainty in regard to the evils of term business and the fictitious element which it imports into the rate. Several years ago, when I was invited to make a little address before the New York State Board, I remarked, concerning this evil, in language more forcible than polite, that I believed that it was the head devil in all our troubles! I believe so still!

Mr. Geo. W. Hayes: I desire to offer the following resolution—

*Resolved*, That the thanks of this Association are especially deserved and most heartily given to Mr. C. C. Hine for the many kindnesses which he has shown this organization in the past, supplemented to-day by an address that shows his vast labor and research in behalf of this body, and we desire to express our high appreciation of the same.

A rising vote was taken on this resolution of Mr. Hayes, and it was unanimously adopted by the Association.

The President—

I have a letter from the Fire Engineers, in which they say that they will be with us this evening. They expect to attend and hear the lecture of Prof. Ordway, and then invite us to join them at the Grand Pacific Hotel in a discussion. What is the pleasure of the Association now?

Mr. A. W. Spalding—

Has there been an evening session provided for?

The President—

Yes, sir. The next thing on the programme, if there isn't anything else, will be a discussion. Is it the pleasure of the convention to proceed with the discussion?

Mr. J. O. Wilson: I would like to offer the following resolution now—

*Resolved*, That at some time, to be named by the President, on reflection, the subject of Mr. Hine's address be made a special order for some remarks and discussion.

It seems to me that that is not only a proper thing to do in his behalf,

but much more eminently proper in our own, and perhaps the suggestion will be adopted without a vote; but if a vote is necessary, I would ask some member to second my motion.

A member: I second Mr. Wilson's motion.

The President—

If there is no opposition it will be taken by consent. The Chair will announce to-morrow morning upon convening what hour during the day that paper of Mr. Hine's will be before the Association for discussion. In answer to Judge Spalding's question, I will say that the programme contemplates a lecture this evening in this room, at eight o'clock, by Prof. Ordway, of Boston. According to the programme, there is a discussion now in order, to which we will proceed, unless the Association otherwise direct.

Mr. J. C. Griffiths—

I think that in view of the fact that we are all pretty well heated, and have been giving very close attention to Mr. Hine's paper, that it would be in order now to adjourn; and, therefore, I move we adjourn until eight o'clock this evening.

The motion was seconded and carried, and the Association consequently adjourned, to meet at 8 o'clock P. M.

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### EVENING SESSION.

The convention re-assembled at 8 o'clock P. M., with President Drew in the chair.

The President—

In behalf of the Fire Underwriters' Association of the Northwest, we are glad to see our friends here—the chiefs of the fire departments. We extend to them a cordial welcome and greeting, as also to the ladies and gentlemen who have honored us with their presence to-night. I now have the honor of introducing to you Professor John M. Ordway, of Boston, who will address you on "Spontaneous Combustion."

### SPONTANEOUS COMBUSTION.

MR. PRESIDENT AND GENTLEMEN :

When flint strikes steel sparks of fire glow for an instant and vanish. But if the tiny particles fall on dry tinder or gunpowder, there is something more than a transient light. And so civilized man, from the earliest ages to the second third of our own century, has been wont to summon fire

from cold, dead matter. The phenomenon is so simple and so common that it hardly ever arrests one's thoughts, and yet there is a mystery about it that could not be cleared up till modern science had shown what fire is. The ancient Roman poet tells us that Jupiter hid fire in the veins of flint ; but had Virgil ever seen the roaring charcoal heap wherewith the Chalybes of his time reduced their ores, he might have guessed more wisely, and thought that the flint only draws out the fire stored up in the hardened product of the forge—the child of fire.

At first thought it might seem that sparks produced by violent concussion have little connection with the flames which sometimes burst out suddenly from a quiet, motionless mass of matter. And yet the experiment of the tinder-box may well serve to throw some light on spontaneous combustion. We find that heat may be produced by friction, or by concussion, or by tearing apart the particles of a solid substance, as well as by chemical matter. Thus, when a ball of lead is dropped many times on a hard floor it becomes slightly warm. When we bore iron the friction and abrasion often make the metal too hot to handle. So when I strike the steel a sharp quick blow with the stone, the shock, the rubbing, the displacement of particles all make some heat. And yet I must repeat the blow many, a great many times in rapid succession, before the metal feels sensibly warm. How, then, does it happen that the little fragments of metal which are broken off by a single stroke become so intensely heated that they burn and shine ? For we know that only when the blacksmith brings his iron to a dazzling brightness does it begin to throw off burning particles. Remember that the same fire that will burn up fine wire in a second or two will be many minutes in heating a rail end to the welding point. Now, since the molecular motion is equally shared by the tiny particle struck off and the mass remaining, the quantity which heats the thousand grains one-thousandth of one degree will raise the thousandth of a grain one thousand degrees, and then this infinitesimal bit may well glow and burn. Only let it be small enough and one feeble blow will make it luminous. To have it small enough we must use hard steel, and not soft metal that will come off in comparatively large shavings and make no show. But the heat of friction and concussion is trifling as compared with that afforded by combustion ; and so as the ignited particle falls through the air it gets hot enough to light a little point of the fast-burning tinder, and presently we exclaim, " Behold ! how great a matter a little fire kindleth." Almost anything but the non-conducting tinder would scatter and quench the heat, which is intense, indeed, but infinitesimally small in amount. The very, very little thing has only to be kept alive and cherished to become a fearful, all-devouring monster.

But how and why does the heated atom of steel burn, and what is combustion ?

Men found a clue to the mysterious phenomenon a century ago, when

they discovered oxygen and found that fire cannot burn and that we cannot live without this "vital air" which makes up a fifth part of the earth's atmosphere. It was found that this same oxygen may unite with all simple bodies, like coal, and sulphur, and phosphorus, and iron, and lead, and also with compound substances like wood, and wax, and oil, that have not already taken up their full share. Warmth generally induces or increases the tendency to combustion, and when the temperature is high enough the union goes on with fierce rapidity, and light and heat are given out till all the combustible matter is consumed or transformed. This quick, self-sustained oxidation, so striking to the senses, is what we commonly call combustion. Some few substances are so greedy of oxygen that without being heated previously, they ignite and burn as soon as they come in contact with the air. But the bodies that come within the range of our every day experience need more or less heating to start combustion. We are familiar with the phosphorus of match tips as inflaming ( $140^{\circ}$  Far.) easily. Sulphur requires a higher heat. Charcoal must be made red-hot. Anthracite coal burns with still greater difficulty. And iron must have a white heat to make it throw off scintillations.

Freshly made phosphide of hydrogen takes fire when it escapes into the air. A red-hot iron will light ordinary illuminating gas. Hydrogen kindles at about  $1,000^{\circ}$  Far.

But though charcoal and sulphur and hydrogen gas do not change unless they are heated, there are not a few substances that oxidize slowly at the common temperature of the air with no apparent production of heat and light. Thus a lump of iron-rusts and linseed oil spread out in painting dries in the air, and there is no measurable elevation of temperature. Still it does not follow that the iron or the oil really remain absolutely cold all the time, for let the production of heat which combustion finishes in two minutes, be extended through two months, and dissipation will keep even with production so that the most delicate instruments will reveal nothing. Pulverize the iron so that the little particles altogether present ten thousand times as much surface to the air and it will oxidize ten thousand times as fast, and then we find that there is a rise of temperature which can be appreciated. Soak up the oil with cotton fibres so as to multiply the surface a thousand fold, and you must beware lest the rapid warming change silent oxidation into combustion.

In these latter days researches in the province of thermo-chemistry have shown that the same total amount of heat is given out in a chemical combination, whether the union takes place in an hour or a year; whether it is effected continuously or by successive and interrupted stages. A pound of fat, in changing to carbonic acid and water, gives out so many units of heat, whether it disappears in a blazing fire or is oxidized at blood heat among the tissues of the body. With man's cumbrous devices the oil in flames may make steam enough for a few strokes of an engine and it is

gone. In the animal organism its slow oxidation gives warmth and life and activity for hours or days. Nature economizes the heat by surrounding the living creature with a non-conducting coat of fat or fur or feathers. And in our operations, if the heat of gradual combination is concentrated and retained by heaped up non-conducting material, the cumulative effect develops a startling energy, and the whole may burst into flames at a most unseasonable time. The most common cases of spontaneous combustion are those occasioned by the animal and vegetable oils which are so much used for food, for lubricating machinery, for light, for oiling wool, for soap making, for painting, for dyeing. All of the immense variety are more or less prone to oxidation even in the cold, but warmth accelerates the action of the air. For paints and dyeing mordants the change is desired, and we take pains to favor and regulate it by sundry devices. For other purposes we would hinder it, if we could. But occasionally, by reason of ignorance or carelessness, the devouring enemy is allowed to steal a march and make sad havoc. The innocent looking basket of greasy cotton-waste is left in a warm room at night and the next morning the basket has disappeared, and the room—well, the insurance agent received notice that the room has been indefinitely extended. “Cause of the fire unknown.”

Of course the so-called drying oils are most in danger of exceeding the proper limits of oxidation. Cotton-seed oil is also one of the most dangerous. There is, however, no safety with any of the oils of animal or vegetable origin, unless all heaping together of oiled stuffs is avoided. There should be a very free circulation of cold air all around them, so that the heat shall be carried off as fast as it is produced. Waste-baskets should be replaced by iron barrels with close-fitting covers to prevent the free access of air and starve an incipient combustion. Fortunately in Turkey-red dyeing and in the manufacture of oiled cloths it is for the interest of manufacturers to keep down the temperature, for if the oxidation goes on a little too fast and too far without burning, still the cloth becomes undesirably tender.

Many think that dampness favors the spontaneous combustion of oils, but there is no good reason for this belief. In experimental attempts to induce the self-kindling of oiled cotton it is best to have everything dry, and I have found the chances of success to be much greater if the two-ounce bunch of waste is kept in a space heated twenty or thirty degrees above the boiling point of water. A conveniently small mass needs to be put in a warm atmosphere to prevent too rapid radiation of the heat produced. The larger quantity which makes an actual fire is thick enough of itself to retain its heat.

Many years ago a worthy friend in Philadelphia packed in saw-dust a tank for rendering tallow. One night the tank and the factory disappeared and there was no clue to the incendiary till on going to the rebuilt establishment early one morning, the casing of the tallow tank was found half



consumed and in a fair way to cause another serious loss. Of course in these cases the saw-dust, which had gradually become soaked with tallow, was kept at a high temperature during the working hours, and there was a great chance for a good start in oxidation. But when shallow boxes of saw-dust, set to catch a drip of oil from shafting, are accused of taking fire of themselves, I am disposed to append an interrogation point. Two or three inches of saw-dust in an open box will hardly allow of much accumulation of heat, and saw-dust is not so very combustible. The drip-catcher is a convenient place in which to knock off the ashes of a cigar or to throw spent matches still burning. And it would not be so very strange if the theory of spontaneous combustion were sometimes brought forward to hide more probable causes of the fire.

I once hurried to a fire, which was soon extinguished, that appeared to have started from a small heap of finely-ground madder. But madder is not generally reputed to be spontaneously combustible. Inquiry brought out the fact that the pipe-fitter, a few hours before, had put on a new gas jet near the heap; but he declared that he had lighted no match and had used no fire. But I knew very well that his general habit was to make sure of the tightness of the joints by exploring with a lighted match, which might drop on the floor when it was done with. It has always been a mystery how that fire started, and it has always been hard to understand why that man, in that particular case, omitted to test his job in the usual way. If lighted matches, and cigar ends, and pipe ashes were not so often thoughtlessly flung away, there might possibly be fewer mysterious fires, and we might have less lurking suspicion that spontaneous combustion is not responsible for all the fires that are laid to its charge.

Mineral oils are much used for lubrication now-a-days, and it may well be asked whether we have anything to fear from them. They have no affinity for oxygen at the ordinary temperature of the air, and hence they cannot warm themselves. It has even been shown, by many experiments, that an admixture of ten per cent. or more of a mineral oil with animal or vegetable oils, tends to protect them against spontaneous change. The heavier petroleum oils, therefore, have something more than cheapness to recommend them. Their indestructibility may be turned to good account by man. But as organized beings have no joints of brass or iron, so they have no need of unchangeable lubricants. The oils which so abound in the animal and vegetable kingdoms are to serve for other purposes and they would be ill-fitted for their offices, unless they were made subject to oxidation and transformation. We find the vegetable oils mostly in seeds in which they are stored up to serve as concentrated food for the young germ when it sprouts. They must, therefore, be so easy to change that the little embryo can turn them into other compounds to suit its various needs.

In animals the fat is stored up against a time of need, as a heat producing matter, and it must be oxidizable at a low temperature. Out of the body oxidation may run riot, as we have seen, but in the body the water, which always abounds, keeps down the heat from within and the heat from without so that the temperature can never rise many degrees above 100° Fahrenheit.

They do, indeed, with sober face, tell marvelous tales of the spontaneous combustion of human inebriates, but such stories rest on credulity rather than reason and exact observation. That alcohol strong enough to burn can exist in any part of the human system, is utterly incredible to any one who knows the behavior of animal tissues in contact with strong spirit. And even were one's body saturated with combustible alcohol, we can conceive of no chemical action that would make it warm up. Alcohol oxidizes to vinegar and gives heat when weak spirit trickles through shavings charged with a suitable ferment, but the action is arrested and the ferment is killed if we attempt to use a combustible spirit. The days when the devil claimed his own with a blaze of fire and a smell of brimstone have passed away, and the spontaneous combustion of drunkards is one of the lost arts. Modern chemistry cannot explain how it was effected. No doubt, the adversary causes fires enough through the agency of strong drinks, and we could insure buildings and ships at a lower rate if we could first insure all watchmen and porters and janitors against the insidious seductions of the tempter.

There is another class of bodies produced in the vegetable kingdom which give the odors of plants. They are called essential or volatile oils. Their name is legion, but oil or spirits of turpentine may be taken as the general type of all. This is very fluid, but it has a considerable affinity for oxygen, by which it is thickened and gradually changed to resin. In the turpentine which exudes from the injured pine tree, we see a mixture of the oil and the resin. It is proper to inquire whether resin and turpentine, which are so oxidizable and inflammable, are ever liable to spontaneous combustion. If they are so, we might expect occasional self-starting fires in our pine forests. There is very little positive evidence on this matter; and, indeed, we have little occasion to deal with turpentine while the fixed oils are in very common use. The volatile oils are so powerfully odorous that we handle very small quantities. Still, the oil of turpentine has been much used in connection with paints, and were it specially dangerous the fact ought to be known by this time. We are, indeed, the more cautious of it because of its great inflammability, and were it as liable to spontaneous combustion as cotton-seed oil, as more caution is used with it, there would be very few cases of trouble.

Very thick turpentine or resin is so sticky and so prone to cohere into compact masses that it would be very hard to impregnate cotton or any other loose stuff with it in the same way as with linseed oil. From all that

is known at present we can only say that spontaneous combustion from essential oils or resins is not impossible, but is not to be particularly guarded against.

Attention has been called of late years to the spontaneous ignition of some textile fabrics through the agency of certain dyes. Astrigent matter, like tannin, which is used for blacks and grays, and catechu, which is used for brown, when they have been applied to wool, yarn or cloth, take up oxygen pretty rapidly, and when the goods lie in heaps, danger is to be apprehended. Black silks, which have been very heavily weighted with dye-stuffs, have been known to take fire in dyeing, and it is considered unsafe to pack them in deep boxes for transportation.

In the case of cotton goods the oxidation reaches its limit in a few days and there is no further danger.

Two or three instances have been reported of spontaneous ignition of garments that had been cleansed with benzine. As naphtha is not liable to oxidize, it would seem more likely that the fire was caused by the dye-stuff, for the benzine might have dissolved away some waxy or oily matter and given the air freer access.

The peculiarly excellent aniline black on cotton is dangerous without very thorough ventilation during the aging. The black is produced in the cloth by the powerful oxidation of a colorless salt of aniline. And here we come to consider combustions that are not started by atmospheric oxidation. A changeable mixture of muriate of aniline, chlorate of soda, and an exceedingly small quantity of vanadate of ammonia, is painted on the cloth and allowed to undergo a transformation by lying some hours after drying. The chemicals gradually react on each other and the chlorate of soda yields its oxygen to the aniline, and heat is produced. The action may last three hours or three days, according to the temperature of the room, and, of course, it is most dangerous when it is finished in the shortest period.

There are other chemicals which it is dangerous to leave to themselves. Silks heavily weighted with picrate of lead are reported to have been set on fire by the spontaneous decomposition of the picrate.

Some mixtures made for fire-works have been found liable to go off of themselves; thus, nitrate of strontia, sulphur, and chlorate of potash, when put together, react on each other in the course of a few hours; and certain compositions for a purple flame have proved to be unsafe when made with oxide of copper.

After the fearful explosion of nitro-glycerine in Fulton street, New York, and those at Aspinwall and San Francisco, it became evident that this blasting oil is liable to spontaneous decomposition when it is kept in the liquid state. Fortunately dynamite has no such tendency.

Most people have a wholesome fear of explosives, and are cautious about handling or storing them. There is, therefore, much less real danger from

such things than there is of chemicals which are in every-day use, with which we have become so familiar that we do not sufficiently heed their insidious nature. We all know well enough that ordinary phosphorus matches are not so innocent as they look to be, and yet many a man will carry them loose in his pocket. Unfortunately the world got accustomed to the loco-foco matches before the red phosphorus arrangement was invented, and now only people who are already careful can be induced to use the safety matches. The hod-carrier and the teamster are not the only ones who will insist on having something that they can inflame on any rough surface. Ordinary yellow phosphorus is greedy of oxygen at all temperatures, and will smoke and smell even when protected by the glue or gum which attaches it to the common match tips. Ordinarily, the comb-like arrangement isolates each little mass of the mixture, and prevents a dangerous accumulation of heat. But in a warm, dry room, the oxidation is accelerated, and when there are large packages, spontaneous inflammation is by no means impossible. Such cases are said to have occurred, and the only wonder is that there are so few of them.

But there are bodies which have no affinity at all for oxygen at the ordinary temperature. Thus, charcoal may be kept for any length of time, even for centuries, without change. It needs a red heat to set it on fire, and yet it has been observed many times that wood charcoal, made by heating soft woods in close iron cylinders, may take fire of itself, within two or three days after it is drawn out into the air. But after several days' exposure there is no further danger.

It is found by experiment that fresh charcoal can absorb and condense within its pores many times its bulk of any gas, and that when it is exposed to the air, oxygen is taken in faster than nitrogen. The condensation of any gas produces heat. So when the coal is drawn and left in heaps, there is rapid condensation and heating, and the light charcoal being an excellent non-conductor of heat, accumulation goes on till the carbon unites with the abundant oxygen; but if the air is admitted slowly or the coal is spread out, the warmth never rises to the igniting point. In the course of a few days the coal also attracts moisture, and becomes less combustible. So the liability to spontaneous combustion lasts no longer than while the product is still in the manufactory.

Mineral coal taken out from the depths of the earth has, in a less degree, this power of condensing gases, and the tendency to heat when in large heaps. But there are many varieties of bituminous coal, and they differ greatly in absorbent power. Some mines are known to yield a dangerous coal, but there is nothing in the appearance of the coal itself from which we could tell its character; and no kind is to be trusted until it has been fully proved. Fires have occurred on land where there was room to put them out; but many a ship has sailed for a distant port with her freshly mined cargo of coal, and never been heard of more. From

1871 to 1880 inclusive, there were 152 cases of spontaneous combustion in British vessels, and in 68 of them the loss was total. In the eleven years preceding Dec. 31, 1880, 318 vessels laden with coal were reported missing, and the number of lives lost was 3,630.

The air does not readily find its way through a thousand tons of coal in the hold of a ship, and in many cases no signs of fire are seen till ninety days or more after the coal is put on board. But the condensation of oxygen hardly accounts for all cases, since there is a mischievous impurity of coal which is not present in charcoal. This contamination is iron pyrites, a chemical compound of iron and sulphur, which is very prone to oxidation when moisture is present. Hardly any coal is free from the sulphur compound. In some sorts it is in lumps; in others, it is disseminated in almost invisible scales. And then pyrite is a general name for combinations which are in proportions by no means the same in all cases. When there is more sulphur than iron, there is but little liability to change. When the pyrite contains 57 per cent. of iron, it is pretty sensitive to atmospheric influences. With moisture present, the mineral oxidizes to sulphate of iron, which crystallizes and loosens the surrounding coal so as to make room for the admission of more air. The heat rises and the oxidation is thereby accelerated, till the coal is hot enough to burn.

The spontaneous combustion of coal has been more commonly attributed to the pyrites in it, and the fact that cargoes that were shipped while in a damp state have been known to take fire would give countenance to this idea. But some say that coals containing very little pyrite, and kept in a dry state, have also proved unsafe, and hence they attribute the trouble altogether to the coal itself. It would seem probable that both causes generally co-operate; but sometimes one plays the chief part and sometimes the other. In any case a very thorough ventilation is the only preventive, but partial circulation only serves to increase an incipient heating. The thorough airing of a ship's hold is no easy matter, and the difficulty is immensely increased when the space is occupied by a mixture of coarse and fine coal not evenly distributed.

But what cannot be wholly prevented may sometimes be cured, if we take it in hand soon enough; and when new coal must be stored in large heaps, it would seem advisable to insert a number of vertical pipes in which thermometers can be lowered from time to time, to detect unsafe heating in any part, and then, should any spot give indications of danger, prompt measures can be used before the point of ignition is reached. But when coal is stored on land it is better to insist that it shall be in many heaps of moderate size, rather than in one immense pile. Of course the danger is decreased by age and by repeated handlings, and coal that has been mined and exposed several months needs little caution.

As coal and charcoal need watching, it is proper to inquire whether

vegetable matter that is not so far advanced in decomposition may ever cause similar trouble. We know that when wood comes in contact with a hot steam pipe it soon turns brown, and after a while appears half charred. Such browned and thoroughly dried wood certainly takes fire very easily, and may perhaps burn of itself, in some unexpected moment. Most prudent people dislike to run the risk, and take special pains to prevent a steam pipe from touching wood. Of course steam, as it is ordinarily used for heating or for power, is not hot enough to set wood or charcoal on fire. By long continued action its heat brings woody matter to a tinder-like condition so that a fire may start, if other causes co-operate. The browned wood is neither wood nor coal, and we know too little of its real nature and character to enable us to say whether in any particular stage of decomposition there is anything produced which has an excessive affinity for oxygen or a rare power of absorption and condensation. But we commonly give too little heed to the constant jarring of long steam pipes. When the steam engine runs fast or when rapid machinery keeps everything in a constant tremor, the friction of the hot pipe against a wooden surface may possibly increase the heat to an unsafe degree. I believe that wood might touch a perfectly still pipe without risk; but the pipe never is still when there is any work going on, and it is liable to sudden fits of greater activity. But it may be said that wood has burst into flames when it has only been exposed to currents of hot air, without touching any solid source of heat. In the only case of this sort that I know of, in which the combustion certainly appeared to have been spontaneous, it was reported that the fire broke out just where hot air coming from below and making a turn, impinged with force against a pine board. This, then, was not a simple still heating, but there was the *vis viva* of hot air rushing through a contracted space and expending itself partly against a very dry, combustible surface. There is such a thing as the friction of air—of air with air, of air with liquids, of air with solids. How strongly air sticks to water may be seen by the foam of Niagara. Air might rush with a moderate velocity for a long time without causing trouble, but let some sudden disturbance of the equilibrium outside cause an acceleration of velocity, and this acceleration may have unfortunate results. Constricted places in hot air pipes will become overheated, and great pains should be taken to avoid all unnecessary contractions; and when hot air is to be carried in narrow flues or pipes, something less combustible than wood should be used for the conductors. Whether there is a possibility of real spontaneous combustion or not, there is at least danger of fire from some cause when wood is kept hotter than boiling water for a long time.

We have an account of fuel bricks that were made years ago, in Moravia, out of fine coal cemented together with a paste made of damaged rye and wheat meal and lime or potash. In unsettled weather these bricks would take fire in spots and keep up a smoldering combustion. As the

coal itself was not of the dangerous kind it was thought that the cementing paste might ignite of itself.

The smoking of organic matters undergoing fermentation in large heaps, naturally suggests the idea of danger. But fermentation cannot go on without moisture, and the evaporation of the water keeps the heat down far below the boiling point. Indeed, the fermentations are changes induced by the growth of living organisms, and living things cease to grow when their temperature reaches 126° Fahrenheit.

I have spoken of unnoticed friction as a possible cause of apparent spontaneous combustion, and we may well inquire whether there are not other subtle agents which may help to bring on ignition when the combustible is in a favorable state of dryness. Thus evaporating oil of turpentine and slowly oxidizing phosphorus change some of the surrounding oxygen into that strong and active modification which we call ozone. How prone this is to combination may be judged by the strong odor and its irritating effect. A large stock of matches may ozonize the air, but the silent discharge of electricity produces a greater amount. It is quite possible that air charged with ozone may excite into dangerous activity what would ordinarily be a leisurely oxidation, and hence certain states of the air may be particularly favorable to spontaneous combustion. Some have attributed the formation of nitre in soils to the action of unnoticed electricity. This may be conjectural, and yet there is reason to believe that we must not altogether neglect the things that are unseen. When the air is very dry in cotton mills the slight friction between belts and pulleys causes not a little electric tension. You become aware of it if you go near a large belt and find your hair rising to make a picture of terror; or, if your hand gets too close and sparks leap forth to meet it. The spinner becomes aware of it when the fibres stand out every way from his threads and a smooth twist becomes impossible. Such a bewitchment indicates that everything is very dry and therefore in the best condition to burn. It requires no great stretch of imagination to conceive that an actual spark may chance to find something that it can kindle. An electric spark can explode a mixture of hydrogen and air, and it is not impossible for an electric spark to explode a mixture of air with a fine combustible powder floating in it. It is not impossible for a spark to leap to tinder-like wood. If we could compel manufacturers who have machinery running at high speed, to keep the air of their rooms from getting too dry, it would be advantageous to themselves, and might possibly benefit those who insure them.

When we come to consider conflagrations and explosions in grist mills we need not go far to seek the causes. In grinding dye-woods with buhr stones ignition is not uncommon, and in grinding grain there have been fearful explosions. The hard stones run at high speed. The two stones are not always perfectly parallel and then there may be excessive friction in the narrowest place, and friction makes heat enough. When the grist

is nearly all through and there is little to work on, it may be the severe friction of stone against stone. And then civilized man is characterized by the abundant use of iron and steel. Nails, nail heads, screws, nuts bits of hoop, and what not, get into almost everything that we handle as merchandise, and in spite of all the care we may use, an occasional fragment of the fire-striking metal will perversely find its way between the stones. Then we have the tinder-box on a large scale. Fortunately the flour is rarely dry enough to ignite, and the chances of serious trouble are few. We may be surprised that there should be an explosion where there is no gas or combustible vapor. But it is known that in coal mines there may be explosions of coal-dust as well as of fire-damp, and why should coal-dust be any more dangerous than wood, starch, or sugar that is suspended in the air?

These explosions which are likely to have come from sparks are sometimes called spontaneous, but I should hardly call the burning of a tree struck by lightning spontaneous, nor would I call any other fire self-caused which had originated from a steel or electric spark.

When friction sets fire to the oil of a railway-car bearing, we attribute no spontaneous action to the lubricant, though we may condemn the oil as unsuitable for the work. The main cause is mechanical action and not chemical reaction.

I have read of the spontaneous combustion of saltpetre bags, but I doubt the possibility of such a thing. I have been troubled many a time with the ignition of such bags, but the burning could be traced always to the touch of a hot coal or a hot poker. The dry bag is very good tinder, and a mere spark will start a rapidly spreading ignition. The nitrates have all the oxygen they can hold; they are, therefore, not greedy for more, and they have no tendency to spontaneous change of any kind.

The powerfully oxidizing acid made from nitre is not so innocent. In the dark it will not change of itself. But give it some combustible to act on, and you are likely to have a lively time. I have several times run warm nitric acid into ill-annealed carboys packed with straw in pine boxes. Crack went the carboy and out ran the acid, moistening the straw and the box. The perverse package is hustled out of doors as soon as possible. In a few minutes the box will be all ablaze, for when the acid meets pine wood or pine knots there is sure to be warm work. When such a thing happens, as it may happen, in the store-house or on the wagon, it is no trifling matter. While nitric acid stays in the bottle it is safe enough, but if it leaks out into organic matter, it soon makes a spontaneously inflammable mixture.

But oil of vitriol, of which so many people have an almost superstitious dread, is comparatively harmless. It blackens wood and straw, but makes no fire. We need not fear it except in the rare contingency of its coming in contact with combustible matter and a nitrate, chlorate,



chromate, or manganate at the same time. Then, indeed, there will be explosive combustion. Thus one of the predecessors of the lucifer match was tipped with a mixture of sugar, gum and chlorate of potash, and when this was touched with oil of vitriol, the fire came. But there is little chance for the accidental commingling of these villainous chemicals, except in the laboratory or in a druggist's store-room.

I have seen a pine table blazing where all had been quiet for hours and no fire had been carelessly scattered. The only substance near it was distilled water, but this was in a bottle of spherical curvature and the bright sun was using it as a lense with perfect success. Had not the bright luminary been opportunely detected in this incendiary attempt, the table would have disappeared and left us no clue to the mysterious fire. Since then I have been very careful to draw the curtains on Saturday night so that the Sunday sun could not shine on the laboratory tables through the bottles of distilled water, and this innocent liquid has therefore had no chance to get up a case of fortuitous combustion which might have been mistaken for spontaneous.

In summing up what is known about Spontaneous Combustion, we may say :

1. Some substances are known to oxidize at the ordinary temperature of the air, and apparently produce no heat on account of the slowness with which the action goes on; but when the oxidizable matter is spread out over bodies which, in small bulk, expose very extensive surfaces to the air, as on and in loose fibrous or spongy non-conductors, the combination goes on with much greater rapidity, and a sensible heat is produced which may accumulate till it is sufficiently high to produce ignition in the interior of the mass.

Of these easily oxidized substances ordinary phosphorus is inflamed by a moderate rise of temperature. The animal and vegetable oils are pre-eminently disposed to change, and when they are absorbed and spread out by combustible fibres heat is developed and kept up, and accelerated by the consequent increase of affinity for oxygen till the whole mass takes fire; and of all cases of spontaneous combustion, the most common and best known are those which occur in masses of oily wool, yarn or cloth.

There are also certain dye-stuffs and mordants, like catechu, tannin and salts of iron, which, when applied to yarns or cloths, render them dangerous.

There are some varieties of sulphuretted minerals, particularly such as are disseminated in mineral coal, which in damp air oxidize slowly but surely and may in time set the interior of large coal heaps on fire.

2. There are some substances which have no affinity for the oxygen in air of ordinary density, at low temperatures, but which have the power of absorbing and condensing in their pores many times their bulk of any gas in which they are immersed. In the air, they take in a mixture richer

in oxygen than common air. By the absorption and condensation heat is produced and the temperature may be thereby raised so high that chemical combination will ensue. The only substances of this class that are of any importance, are freshly made charcoal of wood or peat, and freshly mined mineral coal.

3. Some chemical compounds or mixtures containing a large amount of oxygen in chemical combination, are liable to spontaneous change, which may cause combustion or explosion. Of this sort are the mixtures used to produce aniline black on cotton, the picrate of lead which has been used to weight silks, nitro-glycerine, and some compositions or mixtures for fire-works.

4. The accidental commingling of some chemicals and combustibles may cause combustion or explosion without the previous presence of fire or flame. So nitric acid sets fire to resinous wood; so oil of vitriol cannot, with safety, be dropped on a mixture of chlorates or manganates with combustible substances.

5. Fortuitous but not spontaneous combustion may arise from sparks produced by millstones or from electric sparks. It might even be caused by the friction of a swift belt against wood.

6. It is not impossible that peculiar electric or other conditions of the air may considerably increase a tendency to spontaneous combustion, and indoors such conditions are by no means uncontrollable.

7. If we would guard against trouble from dangerous substances, we must prevent heaping them up in close places. We must ventilate, ventilate thoroughly. We must "divide and conquer."

The President—

Two or three queries have been sent up by gentlemen in the audience, and I suggest that perhaps it would be to the interest of this occasion if the gentlemen who wish to ask questions would do so now. I have no doubt Professor Ordway will gladly answer them, and in that way questions of doubt that are in the minds of any of the gentlemen of the Association, or our friends, the engineers, may be dissipated. If the gentlemen who sent up these queries will please rise and put them to the Professor, they will doubtless have interesting answers.

Mr. Stockell—

I would like to ask the Professor a question: I had an occasion at one time to examine into a cotton torch that had been thoroughly saturated with turpentine. It was laid to one side in a stable, where it remained for three months. While cleaning up the stable one day, it was taken from its position where it had lain so long and placed immediately up above, under the tin roof. That night it took fire; the torch was taken out without doing any damage and thrown into the street. Now, that was satu-

rated with turpentine and had lain three months in that condition before taking fire. I would like to have your explanation in regard to that matter.

Prof. Ordway—

I am very glad to hear of such instances as that, because I think the more information we can accumulate on this subject, the better able we will be to discuss this subject in the future. It seems to me, in such a case as that, the turpentine may have been compacted so closely together that it was impossible for it to oxidize very fast, and when it was separated its tendency to oxidize was probably increased. Now, if you were to take up a mass of cotton or anything saturated with turpentine, and loosen it a little bit and put it up high where the air could have free access to it all around, it may take fire freely when it otherwise could not. If we were to put this into a glass bottle and keep it corked up, it being saturated with turpentine, it would not take fire; but take it out of the bottle and loosen it a little, and you must then watch it carefully. I take it that this incident was occasioned, therefore, by the very fact of the article having been moved, which loosened it a little and gave the air freer access. I should say, in this connection, that we frequently have made experiments on the spontaneous combustion of oils. We generally take the oil and put it in a warm oven and suspend a thermometer in the center. When the thermometer begins to rise it rises very fast, and we find that it is necessary, pretty soon, in order to save the thermometer, to take it out of the oven. When the oil is taken out of the oven and thrown on the floor, it will generally burst into a blaze, whereas, if it were left in the oven, it might blaze and it might not. This is similar, as it appears to me, to the case which you have mentioned. The cotton, in being thrown out, of course, gets loosened a little. The instance you mention is a very interesting one, and is certainly worthy of regard.

Mr. Stockell—

I have on several occasions made experiments with cotton and different kinds of oil, taking the same amount of cotton and the same amount of oil—the same amount of cotton by weight, saturated with boiled linseed oil, then another part of cotton with raw linseed oil. Then I have taken animal oils in their parts, the same amount of each, and I have then taken mineral oils; then I have placed each in a cigar box and put them all, with the thermometer, under the same temperature. I have found that the boiled oil was much more rapid in its progress than the common oil. I have found, also, that the animal oils were not so bright as the linseeds, and I never have yet obtained a fire from mineral oils. I have a record of the time taken for each; that is, the different averages. I have it not with me, however. Those are experiments that I have made myself, to satisfy myself in regard to spontaneous combustion.

There are many Professors, not like yourself, who contend to this day that there is no such thing as spontaneous combustion. We, as chief engineers, have had too many opportunities of testing that question, and we know to our heart's content—and insurance men ought to know it well, too, for it has gone deep into their pockets—that there is or must be such a thing as spontaneous combustion. I am proud to know that myself and others have come here to-night and listened to your lecture, because you have verified what many of us know. We thank you.

Prof. Ordway—

It is worth while to say, in that connection, that we boil linseed oil on purpose to make it oxidize more rapidly. The raw oil will oxidize, too, and it is not an article that is not well known to chemists. It is a good deal better to have it heated up before it is used—heated up and cooled again. After it is once heated it operates with greater rapidity than the raw oil; but raw linseed oil will oxidize soon.

Mr. Damrell—

Will the Professor be kind enough to state, in regard to the ignition of vapor of naphtha, the conditions of the atmosphere that will produce it?

Prof. Ordway—

I don't think vapor of naphtha could be ignited except by a spark. It might be by an electric spark coming in contact with it. In many of our cotton mills the rooms get exceedingly dry and you may draw a spark from a belt. If that can be drawn from a belt at such a time, I know of no reason why it cannot be occasionally ignited by an electric spark; but that is a matter that is worthy of a good deal more study than has been given to it as yet. Electricity may cause fire. We should be safe, undoubtedly, if we could compel everybody to keep the air at a certain temperature with a hydrometer, and I think it would be wise for manufacturers to do that, and thus keep the air at such a degree of humidity that there would be no danger from an electric spark.

Mr. Damrell—

At what degree of temperature may we expect a chemical change to take place?

Prof. Ordway—

In wood I find the change comes on very rapidly, indeed, when it is kept in contact with a steam pipe carrying steam at sixty pounds pressure. The browning will go on at a lower temperature, a little above the boiling point of water, at about 230° or 240°, but it goes on very rapidly at 300° to 305° Fahrenheit. If you put cotton in contact with it, you will see the change much more rapidly. I have wrapped pipes with cotton and have

been surprised to see how quickly they turn brown, the steam varying in temperature from 280° to 305° Fahrenheit. But it is not a positive charring. It is a browning of the wood, and it puts it in the same tinder-like condition that we have in a tinder-box. I suppose that you might strike a spark with a flint and steel, and ignite such wood, especially when it is in the condition that it is in at the time it is in contact with a steam pipe, as we may ignite this tinder (indicating) very easily.

Mr. Damrell—

It being heated by steam, and the steam pipes being supported by iron supports in contact with the girders or floor joists, as the case may be, what time would necessarily elapse from the amount of heat passing through those pipes, say 260° or 280°, before we might expect that it would become so thoroughly carbonized that the least spark that might be created would cause a fire?

Prof. Ordway—

It is difficult to answer that. I should say it would not become particularly dangerous under two or three weeks, but after three weeks I should be very suspicious of it.

Mr. Damrell—

Then do I understand that all buildings so constructed are liable to fire in that way?

Prof. Ordway—

I think it is exceedingly dangerous to have any combustible material in contact with hot surfaces, not that the hot surfaces would set the wood on fire, but it would put it in such a state where it would take fire very easily. As I have mentioned, I have wrapped steam pipes with cotton. I have wrapped them carrying steam at 307° Fahrenheit and kept the cotton around them for six or eight weeks. I have seen no signs of fire in such a case, because the friction I spoke of could not occur, as the cotton would yield, and there is no such rubbing as there would be in the steam pipes pressing against the wood and jarring back and forth. I think people have a very little idea of what jarring there is from steam pipes.

Mr. Damrell—

Then I understand that owing to the vibrations it necessarily follows that the fire condition is very much increased?

Prof. Ordway: I think so.

Mr. Damrell—

There is one other question I would like to ask: We find by observation and general surveys that buildings filled with hay, under certain conditions, take fire, while the hay that is on the outside, subject to the

air, does not take fire. What is the vegetable condition of that hay when stored in a barn which makes it take fire inside, when it does not take fire outside?

Prof. Ordway—

That is a case I could not answer. That must be, however, a case of fermentation, which converts the hay into a highly combustible condition; but why it takes fire, I cannot exactly say.

Mr. Damrell—

When hay is stored in barns or in stables the temperature increases very rapidly, which shows at once that there is an immense amount of heat inside. I would like to know from the Professor the conditions which that hay passes through in creating that amount of heat which finally results in fire?

Mr. W. B. Cornell: That is hay improperly cured?

Prof. Ordway—

Yes, sir; still contains moisture, and thus fermentation results. I never supposed that fermentation could produce combustion. I would not say that it never does. It is commonly reputed, I believe, that fresh hay, when stored in barns, is much more likely to be struck by lightning than old hay, so that electricity apparently could cause fire sometimes, but it would be from a spark of electricity in that case.

Mr. T. H. Smith—

Fresh hay, they say, stored in barns, frequently does take fire. Have you ever heard that advanced?

A Member—

Will Mr. Smith please state his query again, so that we can all hear it?

Mr. Smith—

I asked the Professor if he had not heard the theory advanced that fresh hay stored in barns frequently takes fire?

Prof. Ordway: I was not aware of that.

Mr. Smith—

It is a common thing among farm losses to find the cause laid to new hay ignited by spontaneous combustion. Of course, it is from fermentation; that is, we suppose it is, because we suppose that if the hay is improperly cured and carried in wet, it will retain a certain amount of moisture or water. There is one other point you were speaking about; you were speaking about an electric spark igniting vapor of naphtha. A gentleman, who is an inventor, and who gave his name to the new linseed oil process, and has, perhaps, experimented with vapor of naphtha about as

much as any one that we know of, told me when running a mill here, near the city, that he had often set that vapor on fire with an electric spark. He also said that in taking a cigar he failed to set it on fire—that the coal of the cigar would not set the vapor on fire, while the electric spark would.

Prof. Ordway—

It is frequently the case with gases and explosive mixtures that an electric spark will set them off, or a flame will set them off, when a red-hot body will not. Illuminating gas may be ignited by a red-hot poker very readily, while you cannot set hydrogen on fire so easily, by any means; but apply a flame, if it is ever so small, and it will do the work.

Mr. H. F. Atwood—

I wish one point drawn out in this discussion which has not as yet been touched. Many of the gentlemen know that a hazard exists where we least expect it. I will give two or three places for example. For instance, in an ice-house, in a wheel-pit under a mill, and one or two similar places. I would like to know if you can advance any theory to account for it. I have one case in mind of a fire last November in an ice-house belonging to a brewery, which contained nothing but ice and wet shavings and a large vat of beer. It was a solid brick structure with a metal roof, and the only opening in that building was one about two feet by three feet, covered by a metal door that was kept locked. A fire started in there and it took three hours to put the fire out, and there was nothing to burn but ice and wet shavings. It cost the company seven thousand dollars.

A Member—

That must have been a fire for the purpose of getting the insurance money!

Mr. Atwood—

It was less than half insured. I ask the question in all seriousness, and state the fact in all seriousness.

Prof. Ordway—

I think that probably can be accounted for in some other way. Without being acquainted with all the circumstances connected with such a case, I should be very cautious, indeed, about allowing that spontaneous combustion caused it. I can mention one instance that occurred in the institute of Technology last winter. There was a little space that had been left between the floors, and dust and dirt had been left in it. The building was built about fifteen years ago. A fire occurred in that place between the floors, and nobody knew how it ignited. When we ripped up the floor and examined underneath there seemed to be no cause for it whatever, but I had a strong suspicion that some of the boys

had been smoking a cigarette and knocked off the ashes, which had in some way found access to some of the dirt below. I did not believe that it was a case of spontaneous combustion, as there was nothing there to "combust"—that could be spontaneously ignited, or that would cause spontaneous ignition at all. There was only a little waste stuff there.

There is one thing, by the way, that I ought to have mentioned. It does seem to me that our insurance people would be justified in insisting that carpenters and other people should not leave trash between the ceiling and the floor overhead, as you will very often find, on ripping up the floor, that they do. It is astonishing how much dirt they do leave in those places, and it would be no more than fair to insist that before any building is insured that has just been finished, that somebody should testify that all that kind of trash has been swept out between the floors. Thus a cause for spontaneous combustion will be removed. Then, anyway, matches might get in there and cause a fire.

Mr. T. H. Smith—

In connection with this ice-house that the gentleman was speaking of, I recollect some years ago when a large amount of ice used to be shipped to the East Indies, that the vessels that carried it were regarded as an extra hazard, and an extra rate of insurance was charged. Many of them were lost at sea, which could not be accounted for, and it was thought that the ice cargoes may have been the cause.

Prof. Ordway—

I certainly know of nothing that ice could do in such a case.

Mr. Charles E. Affeld—

I would like to ask the Professor in regard to chrome green. There was a fire occurred on Kinzie street, some time ago, which many of the underwriters probably recollect. It was in a paint store. The fire was put out, but it could not be accounted for. On the following morning they rolled out a barrel of chrome green, which burned harder as it came in contact with the air. I took out some of it and put it in a tin box, and it melted the solder off the box that it was put in. Now, it is understood, I believe, by underwriters, that Prussian blue is dangerous, as also is lamp black, and I presume that this is on the same theory; but I do not understand it exactly, unless it is a mixture of Prussian blue with chrome green that makes it a hazard.

Prof. Ordway—

That is what is understood, I presume. Chrome yellow is a chrome of lead, and all that contains a great deal of oxygen, and it has a strong tendency, therefore, under certain conditions of heat, to ignite with combustible matters with which it is in contact. Now, the Prussian blue con-



tains a great deal of carbon, and we can easily see that in some cases a mixture of chrome yellow and Prussian blue, when they are dry, might ignite spontaneously. Take it in the case of some fire-works; that is internal action, and not the action of the atmosphere. The effect caused by the chromate on the Prussian blue itself, certainly is one of the things that ought to be looked out for. Chrome yellow, as long as it is not in contact with any organic substance, would be perfectly safe, but otherwise it would be liable to burn. Chrome red would be in the same way, if it was mixed up with anything organic. There will be an exception made, perhaps, in the case of those paints when mixed with oil. The oil generally covers up and prevents the penetration of air into the mass. In some cases they would ignite when they are spread out—spread out on cotton—when they would not in a paint keg or anything of that kind. We very seldom have any trouble with paints when they are in the keg,

Mr. Affeld—

Do you consider chrome green exceedingly hazardous?

Prof. Ordway—

It seems to me it may take fire, but I should not reckon it one of those things that are especially dangerous, because I don't know that many such cases have been known to occur. Chrome green is stored very commonly in a dry state.

Mr. Atwood—

I want to get back to this ice-house. I have a question on the matter, and perhaps you can help me out on it. In such cases as I spoke of we find a low form of vegetable life. Now, has that anything to do with the fire? The idea is a crude one, and I ask for information.

Prof. Ordway—

I should not suppose that any fungus there would be the direct cause of the fire. It might produce a combustible gas. We know that marsh gas is produced in the bottom of stagnant pools, and if you stir up the bottom and put a match to the gas that comes up, it will take fire. Such cases have occurred in ships of commerce. There have been cases of explosion in ships loaded with coal. Fire-damp is being continually exhaled from the coal, and this coming up and mixing with the air, makes an explosive mixture, and if this happens to be ignited, a terrible explosion is the result, sufficient to set on fire anything that may come in contact with it. The ice-house you mention may have been set on fire in some such way as that.

Mr. W. B. Cornell—

I rise, not so much to criticise Prof. Ordway, but to thank him heartily for his excellent lesson. To me it has been personally beneficial; it

is the one thing we have needed for a long time. Two years ago, when I had the honor to be the presiding officer of this body, I recommended, as you will well remember, that the subject of Spontaneous Combustion should be treated upon by some able scientist. Last year President De Camp followed in the line of the suggestion and procured Professor Tobin, who was sadly and suddenly taken away from us, as you well know, as we were to have had our paper last year. This year we have got it, and I am personally thankful to Prof. Ordway for the gospel of ventilation that he has taught. That is the lesson he has taught us on this subject of spontaneous combustion—plenty of air.

Now, we may make this time very valuable, if it takes all night, by giving our personal experiences on the subject of spontaneous combustion. Take it in the case of dwelling houses: Fires have been known to originate in close hampers that were closely confined with clothes taken off, probably, full of perspiration. Take it in the case of barns: Hay has frequently been known to have taken fire, especially clover; and only last week we were called upon to pay for a barn in Englewood, caused by spontaneous combustion. Take it in machine shops: I have seen with my own eyes a pile of iron filings in the evening, when I was inspecting a risk, that was luminous. They were very fine and had oil upon them, and I suppose were an accumulation of the shop. Four years ago I paid for a loss in Logansport where the fire was well known to have originated from Indiana coal. Take it in the case of flour mills: There are plenty of instances of fire originating in them, and especially where they have had no air. The Professor preaches air; that is what we all ought to seek after, to have everything ventilated, and thus prevent an accumulation of heat. Another thing in flour mills: Take the accumulations lying upon the floor, around and under barrels. I have put my hand where it was an eighth of an inch and perhaps half an inch thick, and I have felt a perceptible heat. Now, come again to steam pipes: I have in my office to-day a piece of wood, taken from my office where the wood laid over the steam pipe about two years, and it is charred an eighth of an inch deep; and I thank the Professor for giving me an idea about steam pipes that I have never learned before, and that is the vibration. We have suffered there two years with the jerk of the steam pipes. We couldn't do our business there on account of it; and I am satisfied that that had a good deal to do with that wood. This is something we need to look into; the idea of the Professor about the vibrating of the pipes is a new one and it is valuable. Another thing to be looked into in regard to this question of spontaneous combustion, is the action of the sun's rays. Buildings have been unquestionably burned by the action of the sun shining through a circular dome. A dwelling house was burned a year ago by the sun shining through a window on a decanter of water, prismatically gathering the heat of the sun; and I was

told to-day of a judge who was sitting upon a case and left his spectacles lying on the table in front of him, and the sun's rays shining through the lenses of the spectacles caused some legal documents to catch fire; and it was said he was asleep. He was in favor of the company. I am glad to have you here, Professor, and glad to hear you, because it is worth a great deal to all of us to hear your own experiences in these matters.

Mr. W. F. Fox—

I rise that I may ask a simple question. We insurance men, on inspecting paper mills, straw and rags, and cotton and woolen mills, oftentimes tell the proprietors that there is danger in large quantities of rags when stored in their premises, and also wool and cotton for manufacturing purposes. I would like to ask your idea of the danger that lies in large quantities of damp rags and damp paper, damp wool and damp cotton in these mills.

Prof. Ordway—

I think there is more danger in those that are dry. There are so many things in old rags—oil, grease and greasy matter—that you may expect there would be all sorts of things there that would be spontaneously combustible.

Mr. Fox—

Suppose we take clean rags.

Prof. Ordway—

I don't see how there can be very much trouble from clean rags, because they are not liable to fermentation. It would be only the others that would be dangerous, I should think.

Mr. Fox—

In going through paper mills I have run my hand into bales of rags to test this question of heat, and I have found the heat so great that I was very willing to withdraw my hand suddenly. I take it that if these bales did not have the benefit of ventilation, that there would necessarily be spontaneous combustion.

Prof. Ordway—

There would be danger in such cases, undoubtedly. It may go so far as to cause combustion. There is one point that I ought to have mentioned with respect to steam pipes, which I forgot until this moment. It not unfrequently happens, in putting in steam pipes, that the pipe-fitter does not make perfect joints. I have had considerable trouble of that sort this last winter. Where there is not a perfect joint made a little jet of steam comes out there with great velocity, and I have found where such is the case that a piece of cotton, or anything of that sort, put next to that joint

will become charred very much faster than anywhere else. I think it is barely possible that steam escaping in that way, very hot steam, impinging against wooden surfaces, with this vibrating, may of itself cause a fire. That is a case I ought to have included with the others, but I forgot it until this moment. It is dangerous to have any escape of hot steam through a small aperture, such as may happen on account of imperfection in the making of the couplings.

Mr. P. S. Campbell—

There is a case which comes to my mind that I will state: A gentleman claimed that he was using some ink one evening with the aid of a coal-oil lamp, and by some accident some of it got on the floor and in the middle of the night there was a very mysterious fire. I suppose it must have been caused by the aniline in it.

Prof. Ordway—

It must have been owing to the dye-stuff in the ink.

Mr. Wellington—

I would like to ask Professor Ordway one question, and that is whether, in the case of a building with rapidly moving machinery, with the sub-basement charged with moisture and the upper part of the building comparatively dry, whether these conditions would make the air more conducive to explosion in that mill than in any other mill?

Prof. Ordway—

I could only answer that by conjecture. I should think it would be likely to produce a very unfavorable condition, but I know of no positive data so that I could answer that question.

Mr. Damrell—

On behalf of the Association, of which I have the honor to be a member at the present time, I think I but voice the sentiment of every member of that organization, when I say that I return to the Professor my sincere personal thanks for the very kind suggestion that he has made, and which has seemingly heretofore been thoroughly overlooked by the insurance underwriters, namely, that there is an amount of material gathered in buildings, in their construction, which is never noticed when that building is written upon—places filled with shavings and light material ready to burn the moment a spark is applied. If insurance men looked well to their own interest, they would insist, before a policy is written on such buildings, that they should be thoroughly cleaned of these light, combustible materials. If this was done there would be less fires caused by rats than there are now; for, although these rats are excellent scavengers, they are, nevertheless, great incendiaries in their way. I am impressed with the idea that insurance men should look carefully

to the removal of the material for fire, such as this gathering of light material between walls, etc.

Mr. T. H. Smith—

I would like to state a case, and ask what would have been the probable result. Some three years ago I was called upon to adjust a loss on a rag stock. They took in common rags from farmers around the country—mostly cotton—and they were picked over and assorted and baled. The fire came and burned out the upper room. The firemen put the fire out, with a partial loss. There were a number of these bales of cleaned rags ready for the paper mills, thoroughly dried, which were wet down. Following after the fire came a rain which, perhaps, wet them still more. When I reached there, these baled rags were so hot and smoking so, that we were afraid to keep them inside, and consequently moved them out on the sidewalk while it was still raining. Now, the question is, what would have been the result to have left them alone? Would ignition have ensued? The reason I would know, is the fact that the people who owned them took them out, put them in a field, and opened them up and then spread them out there before it was time to tell what the result might have been.

Prof. Ordway—

I should think likely, in such a case, that ignition might have ensued; but it would be very hard to say for certain. It is possible, where a fire is created in that way, that there is some action on the rags on account of the heat, if the rags themselves were dry.

Mr. Smith—

They were in such a position that the heat did not affect them. There was nothing but the water to strike these clean, picked rags, and no heat got near them that would affect them at all.

Prof. Ordway—

I suppose in many cases where rags appear to be perfectly clean, that they still have a good deal of starch upon them, and this ferments and produces a good deal of heat. I suppose people who are going to sell rags to the rag-men do not object in the least to selling collars and the like that have been starched pretty stiff, because they get paid so much more, and while they are in that state they would of course be liable to more rapid fermentation.

Mr. W. F. Fox—

Will a very high degree of fermentation always result in combustion?

Prof. Ordway—

No, I think as a general thing that mere fermentation would not produce

combustion, because it generally involves a considerable degree of moisture, and when there is so much moisture we should expect that the water would carry off the heat.

Mr. Fox—

Isn't the oxygen in the air excluded in large bales?

Prof. Ordway: Yes, I should say so, mostly.

Mr. Fox—

Then the conditions are not favorable to combustion from low fermentation.

Prof. Ordway—

I think not. My own impression is that fermentation—that it alone is not likely to produce combustion. I have always thought that mere fermentation, on account of the absolute necessity of moisture, would not induce so low a temperature as would cause combustion, and yet I may be wrong. It appears sometimes that even dung-heaps have taken fire when they must have been exceedingly moist to start with. Of course, as long as there is so much water there, the water would carry away the heat so that it could not accumulate rapidly. If there was anything to keep it up, combustion might be produced finally.

Mr. W. B. Cornell—

I would like to ask one question: On the prohibited lists of the companies you will find they have prohibited hemp not in bales. Now, I would like to ask, from your standpoint, what the reason of the companies is for prohibiting hemp not in bales.

Prof. Ordway—

I suppose it is from the fact that it is much more liable to take fire when loose than when it is compressed. In bales it is compressed so closely that the air cannot penetrate, but where it is thrown onto the floor loose, the air will get through much more rapidly than one would suppose.

Mr. Cornell—

And yet, cotton bales have been known to take fire on the inside of them and carry fire for three months before it broke out—from the inside out.

Prof. Ordway—

I think it is possible sometimes that fire may have been started from matches. We don't know whether it is spontaneous or not; but there are so many matches used by the men who are handling these things, that there is pretty strong suspicion in my mind that fire is very often bottled up a long time before it breaks out.

Mr. Connor—

In behalf of the members of our Association, I desire to convey to you, Mr. President, and the members of your Association, the thanks of the Association of Engineers for your cordial invitation extended to us to listen to the able lecture on Spontaneous Combustion which we have heard to-night. We will open our session to-morrow morning at 9 o'clock and have a discussion on the question of Spontaneous Combustion, and we will be pleased to have you and the members of your Association present for the purpose of participating in that discussion.

The President—

I would like to ask the gentleman where the meeting will be held?

Mr. Connor—

In the Grand Pacific Hotel, in Judge Field's room.

The President—

We are very glad to have had you with us to-night, gentlemen. Now, before we adjourn, I have the following announcement to make: "The Compact Managers are requested to meet at the Adjustment Exchange, Room 14, No. 177 La Salle street, at 9 o'clock to-morrow morning."

We will now adjourn until 10 o'clock to-morrow morning.

The meeting thereupon adjourned in accordance with the announcement of the President.

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## SECOND DAY.

The convention assembled, pursuant to adjournment, at 10 o'clock A. M., with President Drew in the chair.

The President—

The first business in order on to-day's programme is the reception of reports from the State Boards. These reports will all be received as read and printed in the Proceedings.

The report of the Indiana State Board was then read by the Secretary of the Association, Mr. J. C. Griffiths, as follows:

### INDIANA STATE BOARD.

At your last annual meeting the "Indiana Association of Underwriters," through its Secretary, made an extended and full report of the condition of the State, embodying the then existing difficulties attend-

ing the work of organizing Local Boards, and maintenance of rates made by State Board Committees; that later on in the year, by the assistance of Local Board Commission at Cincinnati, through Mr. Commissioner Bennett, an improvement had been made in all departments of the work, and stating that there were in existence, in a more or less active condition, eighty-five (85) Local Boards. I desire to say that at most of these points difficulties existed in a greater or less degree, consequent upon a condition of demoralization, for a long period of time, produced by cutting rates, and other infringements on the rights of him who claims to be "the noblest work of God." Therefore, the work of redemption has been slow, and it required constant and vigilant work to keep these organizations in repair and in shape to meet the objects to be secured through this channel. Happily, I can say that at this time these points are practically classed as in order, and are realizing favorable results.

The work accomplished during the fiscal year now closing, in connection with the care of these points already referred to, has resulted in an increase of local organizations.

At the present time there are one hundred and twelve (112) active Local Boards working in harmony and with success. Of this number, five (5) are in the hands of Managers and twenty-five (25) with stamping Secretaries. The latter mode is found to work very successfully, and meets the views and wishes of agents more uniformly than any other "specific" heretofore offered "to make the other fellow do the square thing."

The Compact System is in successful operation at Indianapolis, Evansville, Elkhart, Goshen and Kokomo, and application is now pending for the appointment of a Manager at Terre Haute. The aims and objects of these organizations are well known to all interested. The difficulties which beset the path of the committee-man engaged in this work are familiar to those that have had experience in the labors attending it. The work may be classed in many respects, and without doing injustice to other departments of education, as "the training school," the "kindergarten" of the local work; hence, there should be a bountiful supply of charity for him who is delegated to harmonize and influence those his position places him with, and his reward for successful results should be equal at least to the welcome plaudit we all hope to receive: "Well done, good and faithful servant."

To the commission at Cincinnati we are largely indebted for our success. Their liberal efforts in aiding our Association to accomplish the restoration of many of our old organizations and the establishment of new ones, has been met with a hearty response by our members, whenever calls have come for their services. Commissioner Bennett has had charge of the work, and his thoroughness and undoubted ability have resulted in enabling me to report so favorably of our condition. The number of towns yet remaining which would justify Local Boards is not large.



Continued respect should be given by agents and companies they represent to what is known as the rule governing rates where no organizations exist, and especially so when business is sent in from towns in which the Local Agent does not reside and which have local tariffs. Much annoyance and expense could be saved were this rule strictly complied with.

BENJ. KELSEY, *President I. A. U.*

Indianapolis, Ind., Sept. 8, 1884.

The President—

Is there any report ready from Michigan? (No response.) Is there any report from Illinois?

Mr. H. H. Hobbs—

I have a report from the Illinois State Board, and as the President is not here, I have the honor to speak in his stead.

#### ILLINOIS STATE BOARD.

At the request of our President, and in his stead, I have the honor to speak for the Illinois State Board, and to spread upon the minutes of the Proceedings of the Northwestern Association Illinois' report of what of her share of the work of reform and better rates and profit has been performed.

We are not here with any apology for what we *should* have done, for hard and telling labor has been accomplished, and good results achieved.

We have within the borders of this State at present writing 194 operative, successful Local Boards. Fifty-five of these have been organized within the current year.

There are also within our jurisdiction thirteen smooth-working Compacts, most of which have been organized through the machinery of the Illinois State Board.

Our membership is, at present, 59; not as large as it should be.

Like similar organizations, the minority of those enrolled as members does all the work. We report with regret that there are General Agency companies having field representatives in this State, who have no membership or affiliation with us, and in a few cases some companies even refuse us the financial support we request in declining to pay assessments levied upon them, to be used in printing tariffs, etc., made by the labor and time of the more willing, more zealous minority. We hope the time will come when the injustice of this position will become apparent, and then we are certain the remedy will be applied.

The cost of maintenance of the Illinois State Board has, I think, been far below the average of similar associations, the burden of the expense and cost of our work having been borne by individual companies, in the time and service of their representatives.

We desire the brethren from other States to know that we are zealous in the good work in which we are engaged. We desire your full co-operation in all possible ways to advance our companies' interests. We pledge ourselves anew to respect, and obtain the full benefit of the work of our brethren whose jurisdiction borders ours, and close with the hope that another year may see all reputable companies hand in hand with us in our endeavors to make Illinois' record for profit and square work even better in the future than it has been in the past.

Respectfully submitted,

H. H. HOBBS, *Secretary*.

O. E. CULBERTSON, *President*.

The President—

Is there any report here from the Wisconsin, Minnesota and Dakota Union?

Mr. J. C. Griffiths—

I will state that Mr. Potter, the President of our Association, has the report ready, and was expected here this morning to give it.

The President: What is the report you have there?

Mr. Griffiths: Iowa, sir.

The President: Read it, please.

Mr. Griffiths then read the proceedings of the annual meeting of the Iowa Union of Fire Underwriters, held at Spirit Lake, August 22d to 28th, 1884.

#### IOWA STATE BOARD.

The Iowa Union of Underwriters sent in as a report from that body, a transcript of the proceedings of their sixth annual meeting, held at Spirit Lake, Iowa, Aug. 27, 1884, which showed the organization to be in good working condition.

[NOTE.—The report, as presented, was not sufficiently in detail as to Local Board organizations in that State, and being only the minutes of their annual meeting, it was not deemed of sufficient interest to the Association to warrant its being printed in full.—SECRETARY.]

The Secretary—

I wish to state that the following names were submitted to the Executive Committee for membership in this Association, and the Committee recommend them to this Association for election:

P. A. Montgomery, Secretary of the Western Manufacturers' Mutual Insurance Company, Chicago, Ill.

H. G. McPike, Secretary of the Illinois Mutual Insurance Company, Alton, Ill.

W. B. Ferguson, Secretary of the Mississippi Valley Insurance Company, Rock Island, Ill.

W. E. Smith, Secretary of the Mutual Millers' Insurance Company, Chicago, Ill.

John A. Barnes, Secretary of the Commonwealth Mutual Insurance Company, Decatur, Ill.

I. S. Montgomery, Inspector Western Manufacturers' Mutual Insurance Company, Rockford, Ill.

The President—

You have heard the names proposed to the Association by the Executive Committee. All in favor of admitting these gentlemen will say "aye."

The gentlemen were duly elected members.

The President—

I appointed a committee yesterday on the death of Mr. Coombe, and I made a mistake in appointing a couple of gentlemen who were not in the convention. I will now appoint a new committee, namely, Mr. S. E. Waggoner, Mr. Walter Scott and Mr. W. J. Littlejohn. If these gentlemen are not here now, I will be glad, when any of them come in, if you will call their attention to the fact that they have been appointed on that committee, so that they are not overlooked.

The Secretary will now read a communication from the National Association of Fire Engineers.

The Secretary then read the communication, as follows:

NATIONAL ASSOCIATION OF FIRE ENGINEERS. }  
CHICAGO, ILL., Sept. 10, 1884. }

*To the Fire Underwriters' Association of the Northwest:*

GENTLEMEN: The following resolutions were passed, and a copy ordered sent to your Association. Respectfully submitted,

HENRY A. HILLS,

*Secretary National Association of Fire Engineers.*

WHEREAS, An invitation has been extended by the Fire Underwriters of the Northwest, through their President, Cyrus K. Drew, inviting this Association to attend their convocation at this time; therefore, be it

*Resolved*, That this Association fully appreciate their kind remembrance, and assure them it will afford them great pleasure to meet such gentlemen as are deeply interested in the preservation of the property of the people of this nation.

*Resolved, further*, That our convention, being the largest ever held, and business of great importance coming before it, may prevent our attendance in a body, we, therefore, beg it to be perfectly understood, that our object is to endeavor to adopt such laws and open up such discussions as may be best adapted to prevent large fires and protect the lives and property of our people. We, therefore, ask you to aid us in the

establishment of good and substantial building laws, and the organization of good and well organized departments, assuring you you will ever find our Association ready to co-operate with you in such good work.

The President—

You have heard the communication from the chiefs of the fire departments. What is your pleasure about it?

Mr. Milo E. Lawrence—

I move that it be received and placed on file.

The President—

If there is no objection, it will be taken by consent.

The Secretary—

I have here a letter from Mr. I. W. Holman, which I will now read.

MALDEN, MASS., Sept. 9th, 1884.

CYRUS K. DREW, *President, Chicago.*

MY DEAR SIR: I am deeply pained to find, at the last moment, that it is impossible for me to attend this year's meeting of the Northwestern Association, or to contribute anything to the Proceedings. Sickness in my family is the excuse which I offer, and trust it will be accepted as satisfactory, not only by you as President, but by the members in attendance, nearly all of whom are numbered among my most cherished friends.

Sincerely Yours,

I. W. HOLMAN.

I telegraph you to-night. H.

The President—

If there is any miscellaneous business to be transacted, it will be in order while we are waiting for these gentlemen to make reports of their State work.

The Ohio State Board report was then read as follows:

#### OHIO STATE BOARD.

In my last annual report to this Association, I had the honor to report 123 towns in which Local Boards had been organized and tariffs put in operation. I now append a list of 159 towns in which we have a Local Board and a printed tariff, and in the most of these places, I am glad to say, the Boards are harmonious and in good working order. There are a few notable exceptions, which demand, and must have, vigorous treatment, or very serious results will follow. It is largely the fault of the companies themselves that there are any defections to-day, as in almost every case the difficulty could have been healed, if the companies had

responded promptly to the call of President De Camp, and sent their Specials at the appointed time, on important committee work. We yet have about twenty important places where there is no Board, which will be reached in due time.

While our ratings and tariffs have not been all that could be desired in all cases, yet we think much good has been done, especially since August, 1883, since which time all tariffs have been formed upon the model of the minimum tariff furnished by the State Board, and much better results have been obtained.

Three things are absolutely necessary, if we expect this important work to be successful.

1st. Companies must provide themselves with a copy of the tariff in every town, and compare daily reports with the tariffs, and insist in every case upon a rigid compliance.

2d. Remove any agent who does not get tariff rates for all his companies. No agent should be allowed to represent Board and non-Board companies.

3d. Companies, through their Specials, must promptly respond to the call of the President for committee work. This should be especially emphasized, inasmuch as no call is made for committees except in the most extreme cases, where the Commissioner is unable to adjust the difficulty, and the personal presence of the representatives of the companies in interest is absolutely necessary. Respectfully,

J. A. WEINLAND, *Secretary*.

#### LIST OF OHIO TARIFFS.

Ada.	Chardon.	Delaware.	Hubbard.
Athens.	Chillicothe.	Dennison.	Hamilton.
Archbold.	Cambridge.	Dayton.	Hudson.
Akron.	Circleville.	Elyria.	Hillsboro.
Ashtabula.	Cadiz.	East Palestine.	Harmar.
Alliance.	Canal Dover.	East Liverpool.	Ironton.
Ashland.	Columbiana.	Elmore.	Jamestown.
Berea.	Coshocton.	Edgerton.	Jackson.
Bellefontaine.	Cellina.	Findlay.	Kenton.
Bucyrus.	Collingwood.	Fostoria.	Kent.
Bowling Green.	Canton.	Fremont.	London.
Bellaire.	Coalton.	Franklin.	Leetonia.
Bellevue.	Carltonville.	Farmington.	Lorain.
Bryan.	Canal Winchester.	Fredericksburg.	Logan.
Burton.	Canal Fulton.	Garrettsville.	Lancaster.
Bluffton.	Clyde.	Girard.	Leipsic.
Bristol.	Cincinnati.	Greenwich.	Lebanon.
Barnesville.	Cleveland.	Greenfield.	Lima.
Bridgeport.	Columbus.	Greenville.	Mantua.
Batavia.	Conneaut.	Geneva.	Mt. Gilead.
Blanchester.	Crestline.	Gallipolis.	Mt. Vernon.
Cedarville.	Doylestown.	Georgetown.	Medina.
Cardington.	Defiance.	Genoa.	Marysville.
Carey.	Delta.	Gallon.	Marion.

Massillon.	New Lisbon.	Ripley.	Upper Sandusky.
Middletown.	New Philadelphia.	Seville.	Urichsville.
Monroeville.	Nelsonville.	Sidney.	Van Wert.
Marietta.	Oberlin.	Sandusky.	Willoughby.
Miamisburg.	Oak Hill.	Shelby.	Wauseon.
Mechanicsburg.	Oxford.	Steubenville.	Wellington.
Middleport.	Orrville.	Swanton.	Wooster.
Minersville.	Oak Harbor.	Stryker.	Washington C. H.
Montpelier.	Painesville.	Syracuse.	Warren.
Millersburg.	Pomeroy.	Springfield.	Wellston.
Niles.	Pt. Clinton.	Salem.	West Unity.
Napoleon.	Portsmouth.	Troy.	Wellsville.
Newark.	Piqua.	Tiffin.	Xenia.
Norwalk.	Pioneer.	Tippecanoe City.	Youngstown.
North Amherst.	Racine.	Urbana.	Zanesville.
Newcomerstown.	Ravenna.		

Mr. Hobbs—

I would like to ask if it is desirable to have the names of the Secretary and President in the different towns which have been rated.

The President—

I should not think it desirable to encumber our Proceedings with matter of that kind.

Mr. Hobbs—

I would like to know whether you would like to have that, that is all.

The Secretary—

I would say, Mr. Hobbs, that all that is necessary is the mention of the status of the Board, etc. That is all we care about.

In order that a committee may have plenty of time to make an examination as to the gentlemen best adapted for our coming Executive Committee, I move you, sir, that a committee of three be appointed to select an Executive Committee for the coming year.

It was so ordered.

The President—

Before this committee is appointed I would say it was found that some of the gentlemen who were elected on the committee last year were not present and never took any interest in the proceedings. I would make a suggestion to this Committee of Appointment: I think it is advisable not to appoint gentlemen upon the Executive Committee who are not here. If they have shown so little interest as not to come here, I don't think the Association is under any particular obligations to honor them with any position, no matter what. I will appoint on that committee Messrs. T. H. Smith, Milo E. Lawrence and George W. Hayes. You will please be ready with your report this afternoon.

In the absence of the gentlemen who were to fill up the programme for

to-day, we will take up, while we are waiting, the question for discussion as provided in the programme of yesterday. I should like to hear some remarks upon it. If you will look at the first page of your programme, you will see what it is:

*"In a Special Hazard, what 'Vacancy' renders Void or Voidable a Policy."*

Remarks are now in order on that subject. It has always been one of the criticisms made against the procedure of our Association in former years, that we all run to essays and papers, and I suppose every insurance journal in the country has said: "Why don't you have discussion?" Well, the result has always been that if we depended upon discussions we would not have had anything. Now, remember we have one of the most interesting questions that can possibly arise, "What Vacancy renders Void or Voidable a Policy in a Special Hazard," because that is a question you will meet every day and in every town you go to. I hope that the gentlemen, if they have not thought about the subject, will think of it now, and give us something to show that when a discussion is proposed that we have got something to say.

Mr. W. F. Fox—

I just rise to open the ball. I see several gentlemen present here who will send it along with great velocity when they get started.

As I understand it, that condition as to occupancy in a special hazard which would be called "vacant" within the meaning of the policy and the terms of the law, would be when it ceases to be used for the purposes for which it was intended. If it be a special hazard, machinery need not be removed necessarily to constitute vacancy; if it be abandoned as a manufactory, the machines may still be there, and yet it is nevertheless vacant as a special hazard. The distinction that I make, and I think it is correct, in the construction of the word "vacancy," is this: when a building ceases to be occupied continuously for the especial purpose for which it was originally intended. Now, a store is not vacant within the meaning of the law when people cease to sleep in it, because it is not supposable that people sleep in stores; they sleep in their dwellings. They are not supposed to eat in their stores; they eat in their dwellings. The occupancy of a special hazard is its being put into operation continuously for the purpose for which it was built, and when that occupation or that use has been abandoned, it then is vacant for all practical purposes, although the machinery is all intact. The great difficulty comes in in the occasional use of a special hazard. I had a case the other day in adjustment where the factory was used occasionally. The intention was to keep it running temporarily, at periods, so as to guard against the point of vacancy, and yet not occupy it thoroughly because it did not pay; and in making the adjustment I undertook to decide that it was not vacant within the terms of the policy. Although it was vacant at periods, yet periodically it was

occupied by the owners; in that case it was not vacant. The same would apply to a store. If it ceases to be visited and the goods, if any therein, cease to be sold from it, it is vacant, although the goods are there, because it has ceased to be occupied for its purpose. The goods remain on the shelves, and they are unsold; no one visits the store, and it is abandoned. That store is vacant, although the goods are on the shelves. So is a factory vacant while the machinery is on the floor. That is the distinction I would make in that case, that a special hazard, if it has ceased to be used for its original purpose continuously, is vacant; and whether a periodical use of it would relieve that vacancy, is a question for courts, and that depends largely upon the length of time during which it would remain vacant. Six months would be an excessive time, and six days might not. It depends upon the condition of each case what would be a period of time sufficient to render the property vacant within the meaning of the policy, and the law would be for the courts to determine. A dwelling house is vacant when it has ceased to be occupied as a dwelling. Persons may leave their furniture stored in a dwelling, if the intent be to return after simply a temporary absence. The courts are liberal in construing that; but if the dwelling be abandoned and furniture still remain in it, if the people cease to live there—eat, drink, and sleep there—it is vacant.

I had a case once in Iowa, when I was in that district. It came up before Judge Delevan, of the Federal bench, but it was tried before Judge Miller, who was then sitting as the court. The case was this: A dwelling house was built upon a farm by a young farmer; afterwards his father-in-law wanted him to remove to his residence. Their farms adjoined. So the young man packed up most of his household effects and removed them in part to his father-in-law's house and in part stored them; another part remained in the dwelling that he had occupied. He visited the house every day for the purpose of seeing that it was in good condition and that the remaining furniture was still there. One Sunday night it took fire very mysteriously and burned down. I found upon inquiring that he had not lived in the house for several months, but his practice had been to go to the house every day to see that it was all right.

I maintained in that case that the house was practically vacant, and refused to pay the loss. The company was sued. It went before the Federal Court at Des Moines, and Judge Miller held in that case, upon that statement of facts, that as a dwelling that house was vacant; and so decided in favor of the company. I think the whole question hinges upon the abandonment of the purpose for which the property was originally designed. I would like to hear from Mr. Bennett and Mr. Hine on that question.



Mr. J. H. Griffith—

What would be the difference between a vacant and an unoccupied building?

Mr. Fox: There isn't any.

Mr. J. B. Bennett—

The difficulty attending this question is, apparently, just in the failure of discussion. As you know, I have frequently, from the standpoint of practicability, had this question before me. Parties would come to me in my office and they would say: "Here are certain proofs presented; is this a question of non-occupancy or vacancy of the factory?" and I could not lay down any general rule at all. I would say that I would take up the particular individual case; and often you find every individual case has such peculiar features and modifications to it that it is a very difficult thing to treat. There is another matter you will find; whenever the question of non-occupancy or vacancy comes up, you will find that the parties interested will stretch the facts and defeat you, although you have got what would clearly support your position of non-occupancy or cessation of a factory; you are defeated in that point. I see a gentleman in this room, Mr. Gould, who had a case with a tobacco factory, and that tobacco factory was not used at all. He had the point perfectly clear, and yet, at the same time, they could produce such material before a jury that it would have been impossible to have succeeded. And how was it treated? It was treated in the practical way of a compromise. So it is very difficult to lay down any exact rule. That is what the gentlemen are all trying to do. It is for individual decision. I cannot emphasize it in any general way, but I would say that the treatment of a case must be as that individual case requires. Take a good many factories; they are only used one or two or three or four months in a year, and consequently they are partly in operation and partly not, so that it is a difficult thing. I have not given this subject any thought at all or any study. Some of these things require study. I have not studied it so as to present it with sufficient intelligence to be of any material worth to you. I speak this from the impulse of the moment. In regard to the discussion of the question, I know that these gentlemen have no hesitancy in discussing it, but it is so multiform they hardly know exactly how to take it up.

Mr. W. F. Fox—

I want to say a word in regard to Mr. Bennett. He is treating the method of adjusting the policy in case of loss, whereas the question presented to us to discuss is, whether the policy is void or not. We can call the method of treatment up afterwards. We are now discussing the abstract question: "What is it that renders a policy void?" Then the other question will arise. The question we are discussing is—What

does constitute vacancy? not, How you are going to settle your loss? I believe, with Mr. Bennett, that these cases had better be handled in the best way possible. It is a very doubtful matter, sometimes, what the judgment of a jury would be ; but we are not trying that question, as I understand it, Mr. Chairman. It is not as to the best method of settling losses, but as to what does constitute vacancy in the abstract. Upon that point I would like the sentiment of the house, and I would like to hear from Mr. Hine on that.

Mr. C. C. Hine—

I have been so engaged with other matters that I have not given this very much thought. In a general way, Mr. Fox has stated the law in the case, with this difficulty, however, which laps over on to the place where Mr. Bennett places it, and that is, that whether the premises be vacant or not, in nineteen cases out of twenty that is left as a question for a jury to decide, being a question of fact rather than of law. The principle, as laid down by Mr. Fox, is unquestionably correct, that when the premises cease absolutely to be used for the purposes that they were engaged in when they were insured, the policy becomes void. The practical question and the law in the case appear to be very intimately interwoven. I would not undertake to express an opinion in regard to the matter without having looked the whole case over and having given it careful study. This is an important subject, and I trust that some of those whom you have invited to look it over and to be ready to respond, will be better informed for the discussion than I am myself.

Mr. Bennett—

This is a simple matter when you get down to it, but the party who has to apply the practical treatment has got to have the theory sharp and defined. There are many here who are perfectly familiar with it, because they go right to those places, and therefore they understand it and can bring the points right out. They are the sharpest kind of men in their particular profession, and I think, out of respect to this Association, that they ought to get right up and give us the benefit of their experience.

Mr. J. L. Cunningham—

Mr. Fox says that he don't see that there is any difference between non-occupancy and vacancy. The courts of our State hold that there is a difference. For instance, under the old vacancy clause, where the furniture remained, it occupied the building, and if the parties had moved out it was not a vacant building; if the parties moved out, it was occupied and not vacant. So they make a distinction in our State in these two clauses; and when the question comes up on the non-operative or ceased to operate clause, why, then, we have a very plain case before us. A factory that ceases to be operated would immediately come under that clause. There

are classes of risks that cease to operate by the very nature of their design, and I expect that clause in regard to ceasing to operate would refer to them, whether that was their design or not. And yet, when we come back to the vacancy clause (which is the only question, as I understand, that is under discussion here), we have the difficulties presented to us by the gentlemen who have just spoken. Mr. Hine's definition is more exact, as Mr. Fox makes the definition that a building which has ceased to be used for the purpose it was originally built to serve, would then be vacant. Mr. Hine says if it ceases to be used as it was used at the time the policy was issued, it would then be vacant. I think his definition is more exact, because buildings are often designed for one thing and used for another. So the question is, "What was the policy intended to cover?" You see at once the whole question arises on the multiplicity and the multiform condition of things. But the reading of the policy—the printed conditions in it, as well as the written portion of it—is necessary in the individual case that you have to deal with. It is a question that is very difficult, in the abstract, to discuss, and I only say this because I was called up by a wink from my friend, Mr. Fox. This is a difficult question to discuss, except, as Mr. Bennett says, we have some individual cases put before us.

Mr. Fox—

Perhaps it was a case of *lapsus linguae* on my part, but the thought in my mind was as Mr. Cunningham expresses it, "from the date of the issuance of the policy." I do not go back behind the date of the policy to be affected.

The President—

Mr. Potter will now present a report on behalf of the Wisconsin, Minnesota and Dakota Fire Underwriters' Union.

Mr. Potter then read the report as follows :

#### WISCONSIN, MINNESOTA AND DAKOTA FIRE UNDER- WRITERS' UNION.

The President and Underwriters of the Wisconsin, Minnesota and Dakota Fire Underwriters' Union are pleased to make the following report:

At the last annual meeting of this Association, in September, 1883, our secretary reported as in operation in Wisconsin seventy-three Local Boards, in Minnesota fifty-nine, and in Dakota forty-nine; total, one hundred and eighty-one Local Boards. Since that time we have rated in Wisconsin sixty-four, in Minnesota thirty-five, and in Dakota twelve towns. Now we have in working order in Wisconsin one hundred and thirty-seven, in Minnesota ninety-four, and in Dakota sixty-one towns, a total

of two hundred and ninety-two Local Boards, the most of which are in good working order. In addition we have rated specifically the elevators and warehouses of eight different lines of railroads and their branches, as follows: All the lines of railroad controlled by the Chicago and Northwestern in Minnesota and Dakota; the Southern Minnesota Railroad from La Crosse west; the Iowa and Minnesota Division of the Chicago, Milwaukee and St. Paul Railroad; Sioux City and St. Paul Railway and branches; Minneapolis and St. Louis Railway and branches; River Division Chicago, Milwaukee and St. Paul Railway; Main Line of the Northern Pacific Railway; St. Paul, Minneapolis and Manitoba Railway; and the St. Paul and Minneapolis Railroad—in all nearly one thousand elevators and warehouses. This shows one hundred and eleven towns and eight railroads and their branches rated since September, 1883. Those not familiar with the field can hardly realize the immense amount of work that has been done by our State Board in the last year.

Our organization covers a larger territory than any other State Board, and many of the towns being new require constant watching and frequent division of rates, all of which means work for those that are willing to do it. While there is a decided improvement in the number of companies who respond to calls for doing the work, we regret that some of the companies seem to like to avail themselves of the benefits rather than to contribute anything in the way of work, all of which we regard as an imposition on the companies who do furnish the men, and we think it is a serious mistake, and, in fact, expensive to the companies not furnishing help; for what Special Agent is there, in rating a town, who doesn't discover some risk that would naturally slip through his office, and which he from experience would not want and would like to keep off? A Special Agent in that way would save his company more than his salary annually.

At our last meeting we practically divided our Association into two divisions, one called the Wisconsin Division and the other the Minnesota and Dakota Division, and since that time we have held monthly meetings of the Executive Committee and as many other members as could make it convenient to be present in their division—one at St. Paul and the other division at Milwaukee. The object of these meetings is to hear the reports from those who are at work in our field, and we have found them very beneficial. I desire to mention the fact that our Vice-President, Mr. J. J. McDonald, has had almost entire charge of the Minnesota and Dakota Division, and is entitled to much credit for his able management and the help he has given to the work in that division. All the Special Agents are entitled to credit.

Our Association is of the opinion that the business will be greatly improved by grouping towns under a Compact Manager. The Executive Committee of our Association have issued a new and a very comprehensive tariff for the guidance of those in rating. We find that the good results

obtained have fully paid the expense involved. We feel that the tariff, to be of any practical benefit, needs to be made mandatory by the Union. As it is now, it seems to have no binding effects. The receipts in our field were, in round numbers, about five million dollars in 1883. The amount of increase by advance of rates, by reason of Local Boards, the companies have obtained from our organization, is not less than seven hundred thousand dollars, at an expense, aside from expense of Compact Managers, not exceeding ten thousand dollars, including the time and expense of men in rating, while so engaged, which is paid by their own individual companies, of which they receive full benefit by the amount of loss that they save in the distribution of business at that time. Has it paid? Perhaps you say the companies have made no money in this field. If so, how much better would they have been with the same losses to pay out of seven hundred thousand dollars less premiums?

I cannot close without admitting our obligations to the Local Boards generally, wherever they are, for their cordial co-operation and support, and we sincerely hope that the companies which have heretofore been unable to find it convenient to furnish men to assist in rating towns, etc., may be induced to give us a helping hand in the future.

Mr. Bennett—

Is it in order to make any remarks on that report?

The President: Yes, sir.

Mr. Bennett—

The report has suggested some thoughts to me. It says to make it mandatory. That doesn't reach the case. Its being mandatory would only be on the Union companies, consequently one class of the underwriters would be independent. The best way to do is for every gentleman of this Association to first of all call the Board to order, every one resolve himself into a committee of one, call the Board to order, lay the tariff before it, and have the tariff adopted instanter. Now, without doing that, if you go on rating mills, you will have a discussion. You haven't got the time to discuss with these Boards in that way; but just bring them straight to the question; don't get up any discussion, but keep to the main question all the time of the adoption of the tariff. It is difficult, sometimes, to get a full meeting of the Board, but you certainly can get a quorum, and when you have got a quorum you accomplish the point. Otherwise, if you pretend to go on rating they will discuss it and not adopt any tariff. Now, the way to do is to cut clear, right and left, straight through the forest, and then it is done.

The President—

It was ordered by the Association yesterday that the President should name some hour to-day when the paper of Mr. Hine might be a matter

of comment. We were delayed this morning by the tardiness of members. Our time is very precious to-day, but I will now designate this present hour and moment as the time to have such a discussion, and it is now before the Association—Mr. Hine's paper of yesterday.

Mr. J. O. Wilson—

Mr. President, my object in moving that the paper of Mr. Hine be assigned to a special hour was not for an elaboration of it, but rather that the Association should do itself the credit and honor of not passing by such a paper as that without at least some statement of its views.

The Association of the Northwest has had before it, during its fifteen years' existence, many very important papers. They have been timely and appropriate, most of them forcible and many of them useful. All of them, perhaps, imparted more or less pleasure and profit. It has not been my lot, however, to have ever heard a paper read to this body of equal importance with the one presented yesterday. It outranks, in my judgment (and I say this with entire deference to the past and the labors of those who have rendered them), any papers ever presented. I greatly regret my inability to do full justice to it. I feel honored and proud, and I presume every member of the Association is conscious of the same feeling, in having that address delivered before us.

It appears by it that we have cherished some errors, and at this time they are of great importance. Admitting that the paper is correct and that it tells us unmistakably what ails the business, then, unquestionably, the pertinent thing for us is to inquire, "What will we do about it?" The emergency now upon us renders the last question as important as the first, and it seems to me that the men who are here assembled might lend a hand to the reform indicated by Mr. Hine; and when I sit down, as I shall in a few moments, I hope that the officers of the companies who may be here, and the Managers and fieldmen, will say a word of approval of the statements and conclusions made by Mr. Hine, and embody in some form the expression of this Association in regard to them.

Now, first, as to term business—what will we do about it? While we have no legislative authority, we, nevertheless, have ample opportunity with entire propriety to affect very favorably the usage in regard to term business. Suppose three or five years hence we are gathered together, as we are here to-day, and that a chart of the business of the intervening five years be spread before us, there can be no question but that the results shown will be very much more favorable, if the right action be taken now by the gentlemen present. Suppose, then, that in a quiet and concurrent way, we should begin now to instruct our agents throughout the field, advising them, if you please, to drop the five years' business, and make that the initial step. This will be a move in the right direction, and, to unite us in the step, I think that a resolution can be passed here. In

view of the facts presented by that chart, every gentleman here can, with entire integrity to the trust reposed in him, thus instruct his agents, and so a chart presented five years from now will give much more favorable results than it otherwise would. Instead of being nearly half, or say 40 per cent. of the business we are doing now, the term business may thus be reduced to favorable proportions.

Now, in respect to the other item to which our attention was drawn, namely, EXTRA COMMISSIONS, I have no doubt that every one here is perfectly satisfied that the companies cannot afford to pay more than 15 per cent. Now, I assume these figures to be correct. I say I assume this. I do not question it. They were first formulated by Mr. Heald and next examined and compiled by Mr. Hine, who, questioning the record, had them re-examined by actuaries, whose work verified his own conclusions; therefore I do not question them. I bear in mind what he says, namely, that all the figures he reaches are approximate and comparative. A good many little factors entering in may disturb them by fractions, but not materially, and, therefore, for the purposes of the hour, I propose to call them correct.

Now, can we not, going away from here with our minds well settled as to what is a rational commission, strive to limit in some way the commission to that figure? Can we not more easily dismiss from our minds certain unbusiness-like rivalries which stretch that commission up to the abnormal point? It would seem to me that my question, "What will we do about it?" will be in part answered by individual members in the way which I have tried to indicate.

The loss ratio which governs, according to Mr. Hine's chart, all questions which enter into the underwriter's profit and loss, can undoubtedly be favorably affected in the same way, that is, by individual effort of the gentlemen present. I am not in favor of companies taking action and spending time and money for what might be called a general improvement of water systems and general contributions to fire departments; but I see another way, a more practical way, to affect the fire loss, which is within not only our power but our duty as well, namely: By a more rigid and careful inspection of the property we insure.

It seems to me, therefore, Mr. President, that these matters of "*short term business*," of "*commissions*" and of "*inspection of business*," may be reached by us as individuals. Assuming that our minds are convinced, it appears to me that we can become important factors and agents for our companies in the attempt to produce some reform in these directions. I am aware that we are not the companies, nor are we their executive officers, but they confide largely in our judgment, as they certainly confide largely to our industry and care, and there is no doubt that we, the members of this body, have many opportunities to bring about favorable results from such lessons as we have had spread before us.

I have not been willing to assume, Mr. President and gentlemen, that we could quietly sit here and take in all that was spread before us yesterday, and go away and do as we have done before. If our minds are not only enlightened but our judgments convinced by the facts that were presented yesterday, we ought to be more intelligent underwriters, we ought to be able to make some profit out of the business. I believe that in an important sense, the question, "what ails the business?" was answered in the very able paper that was presented yesterday, and I did not feel willing, so far as I am concerned, that my debt to its author should go unpaid, or my acknowledgment remain unsaid. The Association ought, in some formulated way, to state its approval of the conclusions reached therein, and express its disfavor of the present high commissions, the excessive writing of term business and to insist upon a more vigorous inspection of the property insured, our members communicating to each other the result of these inspections.

I might take your time, as each of you could take our common time, in illustrating how much we have assisted each other in the matter of reporting and communicating facts about the business which we write. That has been one result of this Association. But much as we have accomplished, we will have done far more than we have ever done, if we will put into active practice some of the thoughts that I have attempted to suggest in connection with this subject. And I trust the gentlemen who have listened to me patiently for a few moments, and who have had great pleasure in listening to Mr. Hine, will take this opportunity to state what they think of this matter and of the Association itself attempting to carry out, without intruding at all upon the prerogatives of the companies, in some practical form, the thoughts which this chart and the address of Mr. Hine suggest.

Mr. T. H. Smith—

Will the report of the Committee on Rates on Dwellings be in order now?

The President—

It will, unless there are some other remarks to be made upon the paper of Mr. Hine. That being the order of the hour, it is the special order.

Mr. Smith—

I did not understand there was anything before the house.

The President—

That is before the house. But unless there are other remarks, we will proceed to something else. Remarks upon that paper are now in order.



Mr. E. A. Munson, of Indiana—

I agree with the gentleman who has just spoken, with regard to the value of those diagrams and the deductions made. We can learn nothing so much as by experience. But I notice that I make a little different deduction from the diagrams than those presented yesterday. The strongest point that Mr. Hine made was the point in which he said that this diagram led to hell—I believe it was, or hades. Well, I looked at the diagram, and I found that as the ratio increased on term risks, at another diagram I saw the net surplus going up, and the regular dividends passing along and rising above the level or average of 12 per cent., and I thought, Well, what does that mean? Isn't that good enough if we are laying up a net surplus equal to at least 5 per cent. a year? That is just about what it amounts to, as I see by the table. If the net surplus is gradually increasing, why shouldn't that be good enough? Well, I don't know; it don't seem to be going down that way. If hell is such a nice place as that, I thought that looked well enough. Well, I don't know, now; the percentage of surplus seems to have fallen off for two or three years, since 1880. I find, though, in the tables, that several millions of capital had been precipitated and added to the capital to make that average upon. Now, these companies who have a new capital do not seem to make much for the first year or for two or three years, which they could not do. Why, I did not wonder that the net surplus was a little diminished. If the capital should come to a standstill, certainly that surplus would go up to its average and pay 12 per cent. I think things will all come out about right.

Mr. J. B. Bennett—

After a very elaborate discussion, I think you will pardon me for a little anecdote in reference to Daniel Webster. One time they expected a very elaborate speech from him, and he simply said: "Gentlemen of the jury, there is my client; look at him!" and he sat down. And there is my client; look at him! Now I might sit down. But I will say a little further that so invaluable are those tables that I am sorry that such a meeting—but I have no regrets whatever because this is going out; it has got the merits. It is going out to the ten thousands, and it is going to speak to the ten thousands, and not to this little audience here. It has got most invaluable conclusions. It is based upon facts to a certain extent. Of course, it don't embody the whole facts, but that has got nothing to do with the author at all. He has labored very faithfully and patiently in such a way that he has presented most invaluable indications to steer in the right direction; and it will be appreciated, I think. If I were a rich man I should be ashamed to go out of this meeting without some recompense to any artist who has accomplished that work. I would

feel it was a disgrace to do so. But I am a poor man, and I can only express those sentiments in that way. I think what is due from this Association is some very handsome testimonial in the way of an elaborate card for that work, because you will find in one, two or three or four years it will commence and grow up; it has got facts in it.

There is one point that I will call your attention to, however, that it hardly represents the immense amount of capital that went in reserves, largely from reinforcements; but such things as that it is very difficult to show on a diagram. You will find that the rally that has come from the pocket-books right in with these great calamities has been very large. I have heard of parties stepping into the companies office and saying: "I have got no forty-three thousand dollar check for you now at Boston," and yet those parties have come there, and that seems as though it were the earnings of the business.

And, then gentlemen, there is another thing besides that; those that have fallen wounded we pay no attention to. Now, we are indebted to the companies that fall, we don't know how much. In the pride of our opinion, it is very well to be conceited and stand up as though we are of some particular consequence; but, sir, the sufferings that they have had, the loads that they carried and the way they have been crushed out, you do not see scheduled in these tables. And that particular fact is a very important factor.

Now, there is another thing in regard to the question of commissions. You will excuse me for saying so, but, gentlemen, I have made a fortune on  $1\frac{1}{2}$  per cent. commission. You may say it is exceptional, but if a person has been able to make an independent fortune on  $1\frac{1}{2}$  per cent. commission, there is no danger in a proper reduction of commissions, because the extreme proves the point. It is a very important thing. If the gentleman had only brought that one thing to this convention it would have been an important matter in itself, because it is going right straight to the companies, and to some of the directors and some of the stockholders; and those charts are like finger-boards at cross roads, and they are going to tell. I feel that it is the best thing we have had in coming to Chicago. It is worth the trip of coming to Chicago, to have that thing presented in that way; and how we have had any member who has had the patience to do it, is a matter of astonishment to me. I know that he has had reinforcements from actuaries, but he has had the most of the work all the time. Then there is another reason why it is valuable. He is not immersed in the conflict in the way that we are. General Sheridan, at the battle of Stone River, in the heat of the conflict, did not know how it was going, because he was right in the conflict in such a way that he could not see it in the way that others could. This gentleman is not in the conflict, and for that reason what he has presented is impartial. It stands out there as based on the facts and on the best data

that he could get, and I think that the whole profession owes the gentleman more than any vote of thanks for the accomplishment of such a valuable work and the presentation of it to this Fifteenth Annual Meeting.

The President—

Gentlemen, this is very interesting, but we are admonished by the fleeting moments that we must proceed with our work. There are several things that we might take up now. We will hear the report of the Committee on Rates on Dwellings, as presented by Mr. Thomas H. Smith, of Illinois.

Mr. T. H. Smith, of Illinois, upon the Committee on Rates on Dwellings, then submitted the following report :

#### RATES ON DWELLINGS.

TO THE FIRE UNDERWRITERS' ASSOCIATION OF THE NORTHWEST.

*Gentlemen:* Your committee to whom was referred that portion of the President's address relating to Rates on Dwellings, feel that after the very able emphasis given the views expressed therein by Mr. Hine during the later session, any comments by them would be superfluous, yet they cannot refrain from expressing the hope that the coming meeting of the Union will take some absolute and definite action. The rates constantly quoted on dwellings, which grow small by degrees and beautifully less, show somewhat the greed of companies. Example given: One of the most prominent American companies recently wrote in this State at 70 cents for 5 years a farm dwelling that cost \$25,000, when a \$5,000 one was all that was needed. That a dwelling too large or expensive for its place, or finished with a large amount of ornamentation, should pay an extra rate, seems to us incontrovertible.

When to the low rates is added the increase of commissions, which is mainly upon this very class of property, it can readily be seen that the situation is a grave one. Most of the dwellings are written upon a term of years, and we have had recent statistics thereon which should sound a key-note of warning. But your committee feel that there is small ground for hope of an immediate reform, when the first thought that arises on consideration of the figures is, "Physician, heal thyself."

We would, however, most earnestly insist that we all do all we can, from our respective places, to bring about a reform in dwelling rates. So far as rates on contents are concerned, we do not believe a different rate from the building possible at present.

That small dwellings should pay an additional rate is generally conceded, but the owner of a small dwelling, residing therein, has much color for his claim that his love of home is quite as great, and his care exercised quite as much, as his neighbor who lives across the way.

The fact that small dwellings are generally more carelessly constructed is open to argument; but the remedy lies, we believe, with ourselves, in a more careful inspection of them, both on our part and on the part of Local Agents. Here, however, we do strike a valid reason for a heavier rate. The premiums are small, the expense of inspecting and doing the business proportionately greater, and for that reason an increased rate is valid and should be had.

More care on our part in inspecting such risks, we cannot urge too strongly. Don't say to a Local Agent, when inspecting business, "That's a dwelling; no need of inspecting," thereby leading the agent to believe that anything that is a dwelling is desirable. A careful inspection of such risks, the same as though larger, with a slight increase in rate, enough to cover the increased proportionate expense, will, we believe, solve the small dwelling problem.

In closing this report, we repeat again that, in our opinion, *all* dwelling rates are at present too low and worthy concert of action among all the companies for an advance.

Respectfully submitted,

T. H. SMITH,	} Committee.
W. F. FOX,	
J. PEETREY,	

The President—

Gentlemen, what will you do with the report of the committee? If there is no objection it will be received and filed; but, of course, remarks are in order, if any gentleman has anything to say upon it, otherwise it will go to the reporter. Are there any other committees ready to report, who were appointed upon the topics of the address?

Mr. H. H. Hobbs—

The committee on that part referring to State and Local Boards are ready to report.

#### STATE AND LOCAL BOARDS.

MR. PRESIDENT AND MEMBERS OF THE NORTHWESTERN ASSOCIATION.

*Gentlemen:* Your committee appointed to consider that portion of the President's address relating to State and Local Boards, beg leave to report as follows:

That, in our opinion, the State Boards are the *right arms* of the companies, and time and experience has demonstrated the only successful channels through which the edicts of our companies in matters of reform, co-operation and the advancement of rates can be carried into practical effect. We, therefore, report favorably toward an earnest continuance and support of these organizations, and especially request all Managers

and companies, whose field representatives are not now enrolled as members of their respective State organization, to request affiliation and support of the Specials, and give the State Board your aid and comfort.

Local Boards are the subordinate organizations, and the offspring of the State Board, and in just the proportion that the State organization is effective and successful, you will find zealous and honest Local Boards. Enroll your fieldmen in the State Association, gentlemen, and *help us do the work.*

Respectfully submitted,

H. H. HOBBS.  
JOHN HOWLEY.  
WM. L. JONES.

The President—

The report will take the usual course. Are there any other reports.

The Secretary—

I wish to state the Executive Committee have recommended for membership Mr. C. E. Worthington, inspector of the Western Manufacturers' Mutual Insurance Co. of Chicago, Illinois.

The President—

Gentlemen, you have heard the announcement of the Secretary of the action of the Executive Committee?

The President then put the election of the gentleman to the convention, and he was duly elected a member.

The President—

Is the Committee on the Prevention of Fires or on the Three-quarter Clause ready to report. If not, we will hear the Tidings from the Compacts.

Mr. C. W. Potter—

The Committee on the Three-quarter Clause would ask further time. It is a matter of very great importance.

The President: Further time will be granted.

Mr. J. T. Ashbrook, of Indianapolis—

We have had a meeting of the Compact Managers who are present in the city this morning, and the following Compact points were represented: Detroit, Columbus (Ohio), Davenport (Iowa), Dubuque (Iowa), Jackson (Mich.), Kalamazoo, Indianapolis, Wellington (Iowa), Dayton (Ohio), Marshalltown (Iowa), East Saginaw (Mich.), St. Clair (Ill.), Peoria (Ill.), and Rockford (Ill.) We had an informal meeting for the exchange of views between the Compact Managers, and so far as the sentiment of the Compact Managers that were present is concerned, they were almost unanimous in the statement that the Compacts are in good condition at each

point. The business seems to be in a reasonably satisfactory condition. The agents seem to be well satisfied with the system and to appreciate it better the further it is tested. In order not to take up time I have been asked to express this much in this way as the sense of our meeting and as the information from each point. There was one point that was discussed; that was, that while we thank the Special Agents and fieldmen for the aid that they have given us at each point, we think that they can aid us still further, and we hope that we will have their co-operation, and that when they visit the different towns where matters come up that are presented to them, where there seems some difficulty or some friction, that they may be arranged. They can aid us and relieve us of a great deal of embarrassment by avoiding such matters as may be referred to the companies, and they can facilitate our work a great deal by settling those matters while they are at each point.

The President—

We will now have the paper next on the programme, "Rates and the Co-Insurance Clause."

Mr. C. C. Hine—

If you will allow me just one word, before we get away from this Compact matter. I have had two or three little experiences that I would like to put in the concrete in about a dozen words, and that is, the testimony of the non-Board agents in regard to the efficiency and the goodness of the Compacts. I don't believe the devil hates holy water worse than a non-Board agent hates a Compact. Every town I go into, when I visit a non-Board agent, he begins to go for "that confounded Compact Manager; the darn fool, what does he know about business? Here I have had my experience of twenty or thirty years, and don't I know how to write this and that and the other? And here I have got to go up and submit my experience to this fellow, and have him check off my reports, and say that my rates are right, and all that sort of thing! Darned if I do it, you know!" And whenever I hear a man who is not usually profane, that will swear at a Compact Manager, it always makes me feel happy. Not the profanity, mind you. Oh, no! not at all; not that. But it is the testimony to the efficiency and the goodness of the Compact, and particularly of the Manager at that particular place. My estimate of Brother Rothermel was raised the other day in Detroit several per cent. when I saw how low he was estimated by some of the non-Board agents there. It tickled me prodigiously, and I wanted to say just this much for the encouragement of the Compact Managers at this meeting in connection with that subject. Pardon me, sir, for intruding.

Mr. E. R. Pierce, of Peoria, Ill.—

If what the gentleman says is true, the Peoria Compact must stand

very bad. We have one hundred companies in the Peoria Compact; thirty-two of them are non-Board. I pretend to say that there is not a Special Agent that can get one of them out of the Compact. There is one agent who has fourteen companies; twelve are non-Board, and the agent tells me that no inducement could be offered him to leave the Compact. Every non-Board agent in Peoria is well satisfied, and they say to me earnestly, that they want to see the thing go on. That is the way the matter is in Peoria with non-Boards; and I will say further than that, I never have asked a thing of a non-Board company yet which was not granted. They have never gone back on anything I wanted them to do. I say, gentlemen, if you have success in your Compacts, you must have every company with you.

Mr. I. S. Blackwelder—

I think there is a little distinction that should be made. I believe my good friend, Mr. Pierce, has rather misapprehended the point sought to be made by Mr. Hine. Mr. Hine, as I take it, was not intending to say the non-Board companies. He was speaking of a non-Board agent who is out of the Compact, who is fighting the Compact, and is representing certain companies that are fighting the Compact. It makes no difference what other categories those companies are placed in, for so long as he is their agent in the city of Detroit, or anywhere else, and is outside of or disconnected from the Compact, and fighting it, he is a non-Board agent, and the one that Mr. Hine is speaking of. In no sense was Mr. Hine seeking to make a distinction between companies or classes of companies.

Mr. Pierce: I understood that he was.

Mr. Blackwelder—

We should be a little careful in throwing out that kind of a remark here which might be supposed to cast perhaps, if not a reflection, an imputation against companies whose records have always been good. Mr. Pierce is right in speaking of the unanimity of action at nearly all the points; but unfortunately at two points there are a few companies who seek to keep up an agency in antagonism to the Compact, and it is that class that Mr. Hine has come in contact with in Detroit.

Mr. Hine—

Allow me to explain that my use of the words "Board" and "non-Board" had a purely local significance. Board and non-Board do not mean now what they meant in the palmy days of National Board. Many of the finest companies in the whole country are no longer connected with the National Board, and many of the finest companies are. But the significance of the terms is not at all what it used to be. I was using the word purely in a local sense. A non-Board agent is an agent in a particular town

who does not belong to the Board of that particular town, and will not obey the behests of the Compact in that particular town.

Mr. Pierce—

I misunderstood Mr. Hine.

Mr. Hine—

I am glad you did, because it brought out the facts.

Mr. Pierce—

Mr. Hine spoke of the agent saying: "I am obliged now to go to the Compact Manager and get my papers stamped." No non-Board agent, unless he is a member of the Compact, has to do that.

Mr. Blackwelder—

He simply says he won't do it. And we know, of course, those of us who are familiar with Detroit, the particular point that is involved.

The President—

If the Association will indulge the chair in one remark, without calling anybody to preside, I would just say this: That what are called non-Board companies in the West really means companies not associate in the Union, that do not belong to the Union. That is about the English of it. Now, I do not think any class of companies appreciate the good qualities of the Compact system more than those companies. In Evansville and a great many cities where we have the Compacts, they are as zealous and as firm supporters of the Compact as any of the companies. It is to their advantage, and they know it. But it does seem to me unjust that these companies should be permitted to go into cities like Evansville and Indianapolis, and other cities where there is a Compact Manager, and get a good rate, right up alongside of the companies who have inaugurated and borne the heat and burden of the day in this matter, and then go fifty miles away and set up a man in opposition to the Board and destroy the business of that town, and carry off the lion's share of the premiums by cutting rates.

Now, of course, this is not a legislative body; but, as Judge Wilson says, this is a place where we tell one another what we think about this matter, and then we become missionaries and disseminate it in the fields where we go.

Mr. J. B. Bennett—

Mr. President, Crawfordsville is attended to.

The President—

Well, I am very glad to hear it. But anybody going about through this country and seeing these companies getting the benefit wherever



there is a good, strong, stiff tariff, and their agent happens to be a leading agent of the town, can see the injustice and unfairness of allowing them to go into the next town and trying to carry off the scanty living of the agents who are trying to be loyal to the rates.

We will now have the paper by Mr. Fox.

Mr. W. F. Fox, of Chicago, then read the following paper:

#### RATE vs. CO-INSURANCE.

MR. PRESIDENT AND GENTLEMEN OF THE ASSOCIATION:

That "there is nothing new under the sun," is probably as true as to insurance as to physical science.

There are, however, different presentations of the same general matter, which have the appearance of being new, but which are merely the result of kaleidoscopic changes of the original subject seen at different angles of observation.

It will hardly be expected that new principles of underwriting, or new rules of practice can be presented to so intelligent a body of professionals as this Association, and in treating any subject, there is danger of being accused of "threshing old straw." However, as the question in hand is one of great importance in underwriting, your patient attention is invited to a few thoughts it suggests.

The subject to be considered—"Rate vs. Co-insurance"—involves three propositions: 1. What is Rate? 2. What is Co-insurance? and 3. What is the Relation Between Rate and Co-insurance? First, *What is Rate?* Rate is the aggregate measure of every element of the hazard insured against, or the cost of insurance, including expense and profit, mathematically expressed, and has reference to the per centum to be charged the insured by the insurer as compensation for assuming the hazard or liability to loss involved in the risk covered by insurance.

Rate may be said to be either standard or proportionate.

*Standard* rate expresses the aggregate value, or the sum of all the hazards in a risk, or the full measure of liability to loss, modified by the probability of salvage, as predicated upon *full insurance*—that is, where value and insurance are equal, and where there is the *minimum* liability to loss upon partial destruction of the property covered, and the *maximum* liability to loss upon total destruction, for under full insurance, partial property loss involves partial insurance loss, and total property loss involves total insurance loss, for value and loss are always in proportion; therefore, liability to loss and rate must be in proportion also, as liability depends upon value, and rate depends upon loss.

What may be termed *standard rate* applies to *full* insurance, and what may be termed *proportionate rate* applies to *partial* insurance. Every rate,

therefore, is either standard or proportionate, and whether full or partial as to either, is a matter of concern to underwriters.

In a standard rate all the elements of danger in a risk, up to the fire point (internal and external), and all features of safety which may affect the salvage likely to be secured in the event of fire, also the average experience of companies upon the class of risks in question from physical and moral causes, both of which flow into the common record, and for which a proper charge must be made, are considered and estimated.

In a proportionate rate, the standard estimate must be *increased*, in view of the increase of liability to loss, measured with reference to the value of property at risk and the amount of insurance written, for excess of value has a bearing upon possible loss and salvage under partial destruction. With *partial property loss* under *full* insurance, the conditions of value and insurance being equal, property and insurance losses and salvages are equal, but under *partial insurance*, the conditions being unequal, the losses and salvages are unequal, and insurance loss *increases* in proportion to the inequality existing.

A partial destruction of property partially insured, may involve a total insurance loss, but with total destruction, the factor of salvage being eliminated, both property and insurance suffer to the extent of liability.

While it is true that with partial insurance the insurer's liability cannot, no matter what be the value, exceed the amount written as a maximum, nevertheless, the chances to lose this sum are increased all along the loss line, from the minimum to the maximum of insurer's liability, in proportion to the difference between insurance and value, and rate should be correspondingly increased to the proper figure.

Every departure, therefore, from full insurance, where conditions are equal, by increase of value or decrease of insurance, *increases* the liability to loss, and in *inverse ratio decreases* the probability of salvage, and these two features, which enter into loss, must be equalized in the proportionate rate to be charged.

The increase of standard rate, in the proportion that the excess of value to insurance bears to full value, or in proportion as insurance decreases below value, is the proper method of arriving at proportionate rate, for the liability to loss *increases* and the probability of salvage *decreases* as value exceeds insurance. To illustrate:

If the value of property be, say \$10,000, and the amount of insurance thereon be, say \$1,000, the chances for loss to the amount written, or any part thereof, are as ten is to one, as it is value that affects loss, and the value in this case is ten times the insurance, and any insurance loss sustained on partial property destruction is ten times greater than it would be if value and insurance were equal; while the chances for salvage are as one is to ten, for as value exceeds insurance ten-fold, only one-tenth of salvage can apply on insurance, nine-tenths going to the credit of prop-

erty. In other words, the insurer is carrying a liability to partial loss on the *excess* of value over insurance, which in this case is \$9,000, without adequate compensation, unless a proportionate rate be charged, for under standard rate the insurer expects to lose only proportionately with the value covered. Therefore, standard rate must be *increased on value account*, in proportion as liability to loss is affected by value.

It would seem from what has been shown, that the proper rate for partial insurance is the proportionate rate, to be ascertained by the rule given. If the increased rate for the increased liability to loss, consequent upon the excess of value above insurance, be not obtained, the insurer will be carrying an increased liability without adequate compensation, and it is the omission to secure increased pay for increased liability that unduly swells the ratio of loss to premium, for partial insurance at the rate of full insurance is affording partial insurance at a cut rate, the effect of which is seen in the loss record.

If, applying the rule for proportionate rate in general practice, the figure reached shall be too high, the fault will be in the standard rate adopted as the basis, and not in the rule. Basis or standard rate, it must be remembered, is supposed to embrace the value of all the hazards entering into a risk to the fire point, modified by the value of salvage, proportionate rate being merely standard rate increased by the per cent. of increase of liability to loss because of excess of value over insurance, and is simply a matter of proportion.

Whether the rates now obtained by insurers are predicated on full or partial insurance—the latter being always *higher* than the former—the record of companies must attest. If present rates are inadequate, viewed in the light of experience, the standard or basis rate must first be properly adjusted, and proportionate rates obtained in all cases of partial insurance, which, if properly constructed and equalized, will bring up average rates to an adequate figure. The only remedy for low rates is an advance, either directly or indirectly; directly, by an increase of the standard and proportionate rates charged, or indirectly, by securing full insurance where it is now partial, which may be done by the procurement of additional insurance by companies, or by its equivalent, by making the insured his own insurer and a contributor to the full value in case of loss, thus decreasing loss and increasing salvage on property but partially destroyed, and thereby affecting the question of rate.

To increase the rate in all cases, if too low, may not be practicable, for the assured may not be able to pay the increase if demanded, nor to carry full insurance, even if companies were disposed to waive all consideration of moral hazard, if any, growing out of full insurance. But the insurers must have adequate or compensating rates for the hazards they assume, or the business of underwriting will fail, capital will be withdrawn from it, and the assured will be without insurance protection. The procure-

ment of adequate rates being a necessity, if the present be too low (which question is left for insurers to decide), it becomes the duty of underwriters or insurers to devise a method by which rates may be advanced to the paying point and not embarrass the industries of the country.

That present rates are not sufficient to make the business of insurance profitable, the average record, we think, will testify, while the tendency is to further unprofitableness, as will be admitted by any close observer of the "signs of the times." To devise, therefore, a method which will check this tendency, and which will restore and preserve equilibrium between income and outgo is, perhaps, the supreme duty of the hour in underwriting.

If the legitimate profits of ordinary business will not justify the insured in carrying full insurance, nor in paying the proportionate advance on standard rates for partial insurance—for there is a limit to the insuring ability of the insured, as well as a limit to the indemnifying ability of the insurer—the two extremes must meet and harmonize on a common basis. What the common ground is between full and partial insurance, or between standard and proportionate rate, on which both the insurer and the insured may compromise without material prejudice to either—compensating the one, and protecting the other—is one of the prime questions to be solved by the underwriter. To this question there would seem to be but one answer, namely, adopt Co-insurance.

This brings the inquiry, *What is Co-insurance?* Co-insurance, as ordinarily understood in underwriting, is an expression used to denote the relation existing between insurers, and signifies that each is proportionately liable to the insured for loss in the event of fire.

Co-insurance is of two kinds: First, that which relates to the liability of companies only, covering upon the same property, whether the insurance be full or partial; and second, that which relates to the liability of the insurer and the insured as a co-insurer on the same property, the insured being his own insurer in part, and contributing *pro rata* on any loss that may occur.

Under the first definition, the full loss is borne by the insurers, or companies, by *pro rata* contribution, whether the property be partially or fully insured; but under the second definition, the insurers pay only a portion of the loss, the insured contributing in proportion to the *excess* of value over insurance, except where modified by special limitation.

It is Co-insurance under the second definition that is proposed as a remedy for disproportionate or inadequate rates, the proposition being: Co-insurance by the insured, with its resultant benefits in equalizing rates through decrease of losses and increase of salvages.

Co-insurance as between insurers and insured, is co-existent with the system of underwriting, and takes its origin in the early practice of Marine Insurance, from which the Fire branch has sprung up. As indicating the significance and value of this feature of Co-insurance, we will

quote from one or two authorities. *Wesket* on Insurance, published in 1783—a century ago—under the head of “Average,” as applied to Marine Insurance, citing cases, says:

The word “average” signifies, literally, a mean proportion. It is used to signify a contribution to a general loss, and it is also used to signify a particular loss. Average and contribution are synonymous terms in marine cases, and signify a proportioning of a loss to the owners of goods thrown overboard in a storm in order to preserve the remainder with the ship and the lives of men, with the proprietors of those that are saved, and of the vessel. Average in the merchant law, is used or taken for a certain contribution that merchants and others, who have their goods cast into the sea, do proportionably make towards their losses for the safeguard of the ship, or of the goods and lives of those in the ship in the tempest, and it is called “contribution,” because it is proportioned after the rate of every man’s goods carried.

And *Millar*, in his work on Insurance, published in 1787, in speaking of “Average” under “Partial Loss,” says:

Suppose in an open policy, or interest, the subject be *under-insured*, the sums underwritten to be lower than the interest or bond. In such case, the owner himself bears the risk of that portion of value which is not insured. He comes in the place of an underwriter to that extent. A partial loss, therefore, falls upon the insurers proportionally to their different subscriptions, *considering the owner of ship or cargo as himself an insurer of the values not otherwise covered*. If a total loss had happened, it is plain he would have lost to that amount; and he must suffer a partial damage in the same proportion. On the other hand, where has happened a shipwreck and a salvage, the insured, if there be an *under-insurance*, is for the same reason entitled to his proportion of the property recovered. He is an insurer *pro tanto*, and must have the benefits as well as the risk of that situation.

From these citations it will be seen that the origin of Co-insurance between insurer and insured, as applied to Fire Insurance, was in the practice of “average” in Marine, and that the two are analogous in character and effect. In Marine Insurance, however, the condition was and is universal, while in Fire it has never been universal, but is confined to contribution between companies only, except by special agreement with the insured, whereas it should have been retained as to both.

In the National Board form of policy the Co-insurance condition, incorporated in its provisions, which only affects contributions between underwriters as co-insurers, is as follows:

In case of any other insurance on the property herein insured, whether made prior or subsequent to the date of this policy, the assured shall be entitled to recover of this company no greater proportion of the loss sustained than the sum hereby insured bears to the whole amount of insurance thereon.

Which is a contribution of *insurance to insurance*.

The Marine “average” condition, as applied in Fire Insurance, which is only used exceptionally and by express agreement, has been formulated into what is now known as the special co-insurance clause, and affects contribution between underwriters *and the insured*, one form of which is as follows:

In case of loss or damage under this policy, this *insurance* shall be liable only in the proportion that the sum hereby insured bears to the total *value* of the entire property covered.

Which is a contribution of *insurance* to *value*.

This co-insurance clause is, in effect, the same as the "average" clause in Marine.

Under the ordinary Co-insurance clause in Fire Insurance, the contribution to loss in full is made by the companies insuring as *insurance* is to *insurance*, the companies paying possibly a *total loss* with *partial destruction* of property. Under the special Co-insurance clause, which is analogous to the "average" clause in Marine, the contribution to loss, on the entire property covered, is made by the companies insuring as *insurance* is to *value*, the loss being always partial, except (value being sufficient) where there is total loss of property. Under the *average clause* in Fire, the contribution to loss by the companies insuring, on the several subjects covered, is as *value* is to *value*, and may be partial or total, according to circumstances, for the proportions of loss and value may be equal, when partial destruction will involve partial loss, and total destruction will involve total loss.

From the foregoing it will be seen that the loss value of the special Co-insurance clause, the one being considered, is measured by the *difference* between insurance and value—the less the difference the less its value, and the greater the difference the greater its value.

The benefit of Co-insurance to the insurer is in decreased liability and increased salvage in case of loss, which is its prime value. The benefit to the insured is in being enabled to procure partial insurance at minimum rate, in consideration of proportionate contribution to loss, which is so much salvage to the direct insurer, which affects rate by reduction of loss.

Relative to the Co-insurance clause Mr. J. Griswold, in his Text-book, says:

This form of the *pro rata* clause is the universal unwritten condition of Marine insurance, co-existent in principle with its earliest practice. \* \* \* Why this principle was not made universal in the fire contract, as it was and is in the marine, is not clear. \* \* \* The effect of the enforcement of this clause would be to compel a larger amount of insurance to be taken upon property, in order to obtain a full, or even an approximate indemnity in case of loss; and so far as the insured is concerned, in case of loss there would be contribution to the full amount (value) of the property, either by the insured or by other insurance, as the case might be. \* \* \* In France, Belgium, Germany and Russia no policy is issued without the *pro rata* clause. In England, it is made obligatory by law in all policies. All agency policies of English companies contain this clause, and it is coming more generally into use in the fire branch among the companies in America. \* \* \*

Rate, or value of insurance, being estimated by the ratio of loss (or really loss *plus* loading for expense and profit) to insurance, and Co-insurance being estimated by the ratio of difference between insurance and value, we now come to the third proposition, which is:

*What is the relation between Rate and Co-insurance?* It is one merely of mathematical proportion.

Rate proper applies to full insurance, and Co-insurance applies to partial insurance, the excess of full value being carried by the insured, and as already shown, rate increases in proportion to the excess of value above insurance, on account of increase of liability to lose the partial amount insured; therefore, the relation of Rate to Co-insurance is in proportion to the excess of value, or the difference between full and partial insurance, and the *rate value* of the excess (the co-insurance), is in the same ratio. The absence of co-insurance necessitates an advance of rate, measured by the ratio of the excess. But where co-insurance exists the insurance is full, and hence if basis rate be adequate, no increase of rate is required, as liability to loss and salvage are equalized by full insurance.

In view of the fact that, owing to the peculiarities of the business, the individual experience of any company, or of any limited number of companies, would afford but an incomplete and unsatisfactory guide as to the cost of insurance, or the rate value of risks, or of the worth of co-insurance, if generally applied, no attempt has been made to obtain from companies their experience as regards values, lines, losses (partial and total), and rates, upon which to tabulate statistics and formulate a proposition regarding Co-insurance from these points, for the reason that the experience of one company differs from that of another as to all these features, thereby making it impossible to draw any conclusions from such imperfect data as would be furnished. It is the sum of experiences, as shown in the aggregate with its averages, that is of value, for it is the great law of average that controls, and which, being applied specifically, gives general rules for average results.

Furthermore, whether the losses of companies have been partial or total as to amounts written, is of no consequence in determining the value of co-insurance, except in connection with the *value* of the property covered, for the total destruction of property eliminates the factor of *excess*, if under-insured, and renders co-insurance inoperative as to such excess. If property be *totally* destroyed, it matters not whether the insurance be partial or total; but if the property be *not* totally destroyed, the insurance loss, whether the insurance be full, or less than full, would be affected, and in proportion to the difference between value and insurance, and co-insurance would be operative, if applied, to just the extent of this difference. Therefore, an entire line of total insurance losses, or of partial losses, would not indicate the value of co-insurance, unless measured by the value of property covered, which factor is not kept in insurance records. Such statistics, however, as are to be obtained from the aggregated experience of all companies as furnished in their Annual Reports, may be of service in establishing any proposition in the business, and afford the best bases upon which theories may be predicated.

It is probably fair to assume that property, in the average, is insured for two-thirds its value, and that the average line of excess of value over insurance is about one-third.

The average rate of premium of the country is about 1 per cent., and the average loss of premium is about 60 per cent. Now, with only two-thirds insurance, the average loss to companies is one-third greater than it would be if property were fully insured; that is, it is one-third of 60 per cent., which is 20 per cent., which is one-fifth of the premium rate, 1 per cent., or 20 per cent. Hence the value of co-insurance, on this basis, to companies, is equal to 20 per cent. net of the average income. This one-fifth is the sum to be assessed the assured on rate account in the average, to furnish a premium increase equal to the increased outgo by reason of the absence of co-insurance, and this could be done by a flat increase of rate all along the premium line, and, to obtain 20 per cent. net increase of premium, it might be necessary to increase to 30 per cent. gross, to cover loading for expenses, for this increase will be subject to the same expense as the original income.

But a flat increase of say 30 per cent. to present rates would not be equitable as the same average per cent. levied in accordance with the rule above given would be, that is, in proportion to excess of values, for every *full* insurance rate would have to be increased 30 per cent. as well as every under-insurance rate, being an equal per centum advance, whereas the increase should be in proportion as the excess of value bears to the whole value, for that is the sum not insured and upon which the increase is to be made.

As an illustration of the practical benefits of Co-insurance, it is only necessary to refer to the record. For example: From the Report of the Insurance Department of the State of New York for the year 1883, the business of the companies reporting was as follows: Premiums, \$91,445,230; average rate, 97 per cent.; losses, \$54,796,580, showing an average loss of 60 per cent. And from the same report it appears that the entire business of all companies reporting since date of organization, as to American companies, and since date of admission, as to foreign companies, was: Premiums, \$1,083,052,449; losses, \$622,823,657, showing an average loss of about 57 per cent. for the entire period.

Assuming that the average line of insurance as to value is  $66\frac{2}{3}$  per cent., or in other words, that property is insured, in the average, for only *two-thirds* its value, it follows that *one-third* is carried by the insured. Now, applying the co-insurance rule to the record for 1883, we find that the insurance loss would have been \$36,531,044, instead of \$54,796,580, leaving a margin on loss account of \$18,265,526. As the aggregate premium income was \$91,445,230, the co-insurance salvage as to premium received would be about 20 per cent., and a 20 per cent. reduction of losses would leave a very handsome sum to go to surplus and dividend.



And as regards the aggregate record to which reference has been made on the basis of \$622,823,657 losses, and two-thirds insurance as to value, the difference in the loss account under co-insurance would have been one-third less, or \$207,607,886 in favor of the companies, on an income of \$1,083,052,449, or about 20 per cent.

Or, on the basis of an average rate of 1 per cent. for the general business of the country (the New York Report showing the average rate to be 97 per cent.), we would have, under co-insurance, on a two-thirds insurance basis, an increase of premium by proportionate rating, of say 33½ per cent. gross, or \$30,481,743, making total premium \$121,926,973, which, on \$54,796,580, total losses, would increase the margin for profit and very materially increase asset account. And as regards the total business of companies referred to, if rates had been advanced one-third in the average, the premium receipts would have been increased \$361,017,483, making the total premium income \$1,444,069,932, instead of \$1,083,052,449, the amount received, out of which to pay \$622,823,657. This difference in receipts would have averted bankruptcy with many companies, and have made the business one of profit.

Present rates are possibly somewhat above the standard for full insurance, but that they are not up to the full proportionate figures, is evident from the embarrassment under which the business is suffering. An average advance of 33½ per cent. on present rates, under the assumption of the rule given, might not be required, for present rates may partake somewhat of the proportional character, but as the rule for obtaining proportionate rates should be observed, the present rates might be reduced to the proper figure for full insurance, and then advanced to the proper proportionate figure under the rule.

It is quite problematical if the average rate of the country can be very materially advanced, in view of the downward tendency of the value of capital for legitimate investment, and the minimum returns realized in ordinary business and industrial pursuits. The present average per centum charged for insurance is high, when measured by the average profit of business, and should decrease rather than increase.

Theoretically, perhaps, the cost of insurance must be regarded as an item of expense, and prices must be loaded accordingly for profit. But it must be borne in mind that under the laws of competition there is a limit to the loading to be made, and insurance cost must keep within that limit. Therefore, if present rates are inadequate, and yet are as high as business will warrant, the only feasible way to effect an increase is by the indirection of co-insurance, which, upon proper standard rates, will restore equilibrium and bring the business of underwriting up to a paying point.

Then, again, by this indirect method of securing an advance, the antagonism of the insured is largely averted, for the increase of rate is not presented. The required amount of direct insurance is obtained at

the minimum of cost, the insured preferring to carry a part of the risk rather than pay an increased rate, and the company gets the benefit of co-insurance in the event of loss by contribution and increase of salvage.

Furthermore, moral hazard, which is more or less an element of danger affecting risks fully insured, would be removed by co-insurance, except when rendered inoperative by full insurance, for with less than full insurance any loss sustained would be borne proportionately by the insured, which would eliminate moral hazard.

Then to make co-insurance more effective, a limitation clause might be adopted as a matter of increased safety, by which the total insurance to be granted would be limited to, say two-thirds, three-fourths, four-fifths, or some other fractional proportion of the value covered, beyond which the insured would contribute to loss.

Coupled together, co-insurance and limitation—the one for contribution and the other for proportion—would afford the maximum of protection to insurance as regards loss and moral hazard, and the minimum of cost to the insured as to rate.

Why so important and effective a remedy as co-insurance is not applied to a portion, at least, of the evils which afflict the business of Fire Insurance—which feature is retained in Marine, the oldest branch of underwriting—is a question which cannot be satisfactorily answered. It is eminently sound in theory, and should be universally enforced in practice.

It is idle to claim that the interests to be protected by Fire Insurance cannot stand the application of the co-insurance rule as well as those to be protected by Marine Insurance, for they differ in no essential particular.

The chief difficulty lies in the fact that the insuring public has been wrongly educated in fire insurance by the long-continued omission to enforce so salutary a rule, for which omission companies are responsible. The early engrafting of the co-insurance rule from Marine into Fire Insurance practice, should have received the attention of underwriters, and its absence in the fire contract is one of its great weaknesses.

The condition of co-insurance is, as we have seen, a very important one, and one whose adoption is entirely within the control of companies. Has not the time arrived when it should be universally adopted? The experience of companies answers, we think, in the affirmative.

Of the two methods, co-insurance or increase of rate, co-insurance would seem to be preferable, because of the uncertainty of the loss record. Should not the National Board in the East, the Union in the West, and in fact every company acting for its own interests, urge the universal adoption of co-insurance for the improvement of the business? Most certainly yes, and that such action may be uniform, we would suggest the following Co-insurance clause, to be adopted by all companies by January 1st next, in all policies in lieu of the one now in use, viz.:

In case of loss under this policy, this company shall be liable only in the proportion that the amount hereby insured bears to the value of the property covered; and in case of any other insurance on the property covered, the insured shall be entitled to recover from this company only its *pro rata* of such loss, based on the total amount of insurance thereon, with which the insured is to contribute to loss in proportion as the *excess* of the *value* of property covered bears to the total amount of insurance thereon.

This amendment, with a special limitation clause as to total amount of insurance, when necessary, would effect, if adopted, a reformation much needed in fire underwriting, and solve the problem of Rate vs. Co-insurance.

Mr. Milo E. Lawrence, of Indiana, then read the following paper on Incendiarism, prefacing it with the following remarks:

Cyrus, King (Drew), not of Persia, but from the melon-land, well down in the pocket of Indiana, thinking, as did his illustrious namesake, that the license of a ruler is without limit, had drafted for you a speaker, for me a subject. But, mindful of your comfort, he has so arranged the programme that you then have intermission. Were this all that I have to lay to the charge of the worthy gentleman in the chair, it would be of small moment; but after having assigned the subject, he has seen fit to discuss it and get the juice from it, and then toss the sucked orange to the ones following him.

#### INCENDIARISM.

"Incendiarism is the shadow of insurance, and as the sun of prosperity in the commercial sky sinks low, the shadow lengthens and darkens."

Webster defines incendiarism to be the act of maliciously and wilfully setting buildings and other combustible property on fire, and this paper will discuss the subject in the light of that definition.

The ancients, in recognition of that famous medical maxim, "*similia similibus curantur*," treated incendiaries with fire; that is, the incendiaries themselves were burned, to the complete vindication of the maxim just quoted. We regret that among the "lost arts" we must number a mode of "fire prevention" so salutary and effectual.

Let us consider, briefly, incendiarism as a factor in the problem of fire waste. Loss by fire, uniformly too great and constantly increasing, notwithstanding advancement in the science of architecture and introduction of improved methods for prevention and extinguishment of fires, is a subject worthy of the most careful thought. During the last past year, the waste by fire in this country, as you are all well aware, was in excess of *one hundred million dollars*, a sum easy to be named but most difficult to be comprehended. This vast aggregation of values was literally wiped from the face of our land; not a transformation of values, but total destruction of beautiful and happy homes, of the fruit of the loom and

the handiwork of craftsmen. This sum, albeit incomprehensible, is equal to the yearly earnings of an array of men so great that when marched by platoons it would require almost eight days to pass in review.

It is surprising to note the lack of attention paid to this prolific source of poverty and of crime by writers on political economy, as also by our law makers.

It is a truth generally recognized, that those thrown into the closest association with an evil are under the greatest obligations to assist in its abatement. Applying this principle to the subject in hand, and recognizing, as we are compelled to do, that incendiarism is both a colossal and an increasing evil, we, as underwriters, must do what in us lies to lessen it, or we shall not stand excused.

A *post mortem* examination may be valueless to the subject laid on the table, and yet may yield useful results for the guidance of the living.

The year 1883, with its vast fire loss of \$100,149,228, cannot be recalled, nor its loss mitigated, but by analysis of its records we may find lessons of wisdom and warning for the future.

Let us proceed by authenticated channels. The best obtainable statistical information as to fires, and unquestionably the most exhaustive tabulation ever published on that subject, are found in the *Chronicle* "fire tables." In these tables we find reports of 20,489 fires that occurred in the United States during the twelve months under consideration. Of all these reported, we are absolutely certain as to the origin of but 5,071. But this number, less than one-fourth of the whole, will answer for the purposes of comparison and from which to make proper deductions. Of the 15,418 fires not included in the following analysis, 7,971 were burned by exposing buildings, and the remaining 7,447 were of the class so distasteful to adjusters, "burned from some cause unknown to the assured."

Investigation reveals the fact that of the 5,071 we find 1,694, or over 33 per cent., were of incendiary origin, and it is fair to presume that a much greater percentage of those of unknown origin occurred from the same cause. According to statisticians one-third of all our fires is the work of incendiaries—they who wilfully set buildings or other combustible property on fire—and presumably two-fifths of our entire fire waste is the fruit of crime. The number of fires of incendiary origin exceeds those from the combined causes of accidents, carelessness, defective construction in all its bearings, including all defects of flues, furnaces, heating and lighting apparatus, friction in machinery, gasoline and coal-oil stoves, ignition, spontaneous combustion, mischievous children, lightning, and the much-abused tramp. Geographically considered, incendiarism is an enigma. For instance, the entire West, embracing Iowa, Kansas, Nebraska, Dakota, Montana, Wyoming, Utah, Colorado, Arizona, Nevada, Idaho, Oregon, California, Washington and Indian Territories, with an aggregate fire waste of

\$12,158,251, had no more *incendiary fires* than the State of Georgia, with a loss record of \$2,838,075.

The New England States, with a loss record of \$1,786,300 less than that of the State of New York, had 34 per cent. more incendiary fires.

For incendiarism, Indiana stands pre-eminently at the head of the list of States. With a fire record of \$3,571,845, she has more incendiary fires than the four States of Pennsylvania, Iowa, Kansas and California, with their loss record of \$16,842,888.

Accepting the *Chronicle* fire tables as measurably correct, our duty is to locate responsibility. We will begin at home—charity does, duty should likewise.

Are we, as underwriters, in any sense responsible for this state of things? Let us not be pharisaical nor resolve ourselves into a self-admiration society, but be brave enough to enter into self-examination. Our system of compensating our agents is wrong, fundamentally wrong, and tends toward making bad men of naturally good ones; but as the question of compensation to the rank and file of our profession—those that own the business for which we so eagerly clamor and at times do unwarranted things to secure—is but collaterally connected with this paper, we pass it, but not until after expressing condemnation of the plain commission basis for compensating our Local Agents and a recommendation that they be made partners to a certain degree in the transaction of the business; at least be interested in the profit and loss account of their respective agencies.

The insatiate greed of officers and Managers too often causes them to be indifferent to the "moral complexion" of a hazard that pays a fat premium, and leads them to accept contracts in their official capacity which they, in their individual capacity, would scorn. Possibly, too, even the State agent—yes, even he—may see (under pressure from a revenue-paying Local Agent) a somewhat "off color" risk grow into a thing of beauty, if not a joy forever.

The fundamental principles underlying insurance, as it is practiced by underwriters and construed by the courts, has prostituted our profession from a laudable alleviation to that of coerced purchase.

That it is possible, after shrinkage of values or from other causes, for the assured to *speculate* through the instrumentality of an insurance policy, is a fault of the contract rather than of law.

Here, gentlemen, is the vital point, for while the maculate man manager may become a manager man-immaculate, and bad practices as to compensating agents may be corrected, the innate principle of total depravity will continue to point the assured to arson as the gateway leading from the valley of penury and want up to the elevated table lands of affluence, until we, as underwriters, shut the gates against them. I fully appreciate the difficulties of making inroads into the time-honored customs of the profession.

The self-pride of men stands in the way of reform.

A policy of *absolute indemnity* has been, and is, the pride of this generation of underwriters, but the logic of results demonstrates its defects. Underwriters there are who prefer to look to legislation for redress, and ask for State intervention, and that by statutory enactment each party sustaining loss be required to bear, himself, a portion thereof. But such thinkers forget that the companies themselves may, and should so frame their policy contracts as to secure this very thing. It is not complimentary for underwriters to abnegate their prerogative of contracting to fickle law makers. Why should we, like Æsop's carter, call upon Hercules to draw our cart from the miry lane when as yet we have not put our shoulder to the wheel.

We have duties, many and varied. To adjust rates so that they may be commensurate with the risk assumed is a duty, but one seldom performed by reduction in rate of premium. And why? Not because hazards are not constantly improving, *for they are*; not because devices for prevention and extinguishment of fires have not come to the rescue of fire waste, *for they have*; but it is because we make it *possible* for the assured to sell to the insurer. We buy undesirable property, but should be content in alleviating the distress of the unfortunate. Headlong strife for premiums, out of which to pay losses, has been closely followed by loose adjustments, lest the unnatural influx of premiums be retarded. Bad practices thus established have become the creed of the underwriter, and that to such a degree that custom is paramount to the contract in many—may I not say most?—adjustments of loss claims. Is it not time to call a halt? Would it not be wise and well for the underwriting fraternity to arise to the dignity of common right and issue a contract of alleviation instead of a "bond for purchase?" This coveted result accomplished, it is modest to estimate a saving of \$40,000,000 a year in this country alone from *criminal fire waste*.

The honest insurer would no longer have to pay tribute to the criminal by means of freighted premiums to meet incendiary losses. Expense of management would be largely reduced after the successful introduction of this new order of things. With the burning line restricted to honest claimants, the millennium will be near.

It may be in order to briefly state my idea of a model contract. It is as follows:

1. The assured to carry insurance to 75 per cent. of the value at risk or become co-insurer to the extent of the deficiency, *thus insuring equity as to rate of premium*.

2. All partial losses, of say less than 50 per cent. of the value at risk and insured, to be paid in full, *thus encouraging safeguards against occurrence of fires and introduction of appliances for extinguishment of incipient ones*.

3. All losses that exceed, say 50 per cent. of the value at risk and

insured, to be subject to adjustment under the "three-quarter rule," *thus virtually stamping out incendiarism.*

Mr. C. W. Potter—

I move that we adjourn until 2 o'clock.

The President—

Before putting that motion, gentlemen, I wish to state that I have a surprise, in the way of a paper not announced in the programme, and to the hearing of which I invite you all to come, sharply, at whatever hour the Association may adjourn to. I assure you that we are keeping a good feast for you. I think it is entitled "Logs and Logging," or words to that effect, and I think you will find it one of the best papers that has been presented to this Association during this meeting.

Mr. Potter—

I move that that be made a special order, then, for 2 o'clock, and that we now adjourn till that time.

The motion was adopted, and the convention took a recess until 2 o'clock p. m.

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### AFTERNOON SESSION.

The convention assembled at 2:30 p. m., with President Drew in the chair.

The President—

I have the honor to introduce to you Mr. W. R. Freeman, General Agent of the Norwich Union. He will read a paper to you on Logs and Lumber.

Mr. Freeman then read the following paper:

### TREES, LOGS AND LUMBER.

One can scarcely imagine the appearance, 200 years ago, of what are now thickly settled parts of our country. At that time there were forests everywhere, and we read of Penn making his treaty with the Indians at Shackamaxon, now Kensington, under an elm tree of prodigious size; of other elms, adopted as Revolutionary liberty trees, at Boston, Providence, Pittsfield, New York and New Haven, with girths of eighteen to thirty-four feet at the ground, and diameters of ninety feet at the head. There

were also birch, maple, tamarack, hemlock, spruce, pine and other trees in abundance. Poets wrote of—

Those green-robed senators of mighty woods,  
Tall oaks, branch-charmed by the earnest stars,  
Who dream, and dream all night without a stir.

And all of us are familiar with Hood's—

I remember, I remember,  
The fir-trees dark and high ;  
I used to think their slender tops  
Were close against the sky.

It was a childish ignorance,  
But now 'tis little joy  
To know I'm farther off from heaven  
Than when I was a boy.

PENN, JOLIET AND MARQUETTE.

About the time Penn was making his treaty with the Indians at the East, Joliet and Marquette, the first white men who trod the soil of Iowa, embarking on the broad Wisconsin in birch-bark canoes, discovered the Upper Mississippi. Going south, passing the Missouri, the Ohio and the Arkansas rivers, they went nearly down to the Gulf of Mexico; then returning, entered the River Illinois, and were conducted by a chief of the tribe of Illinois to Chicago, and from there to Green Bay.

Marquette returned to Chicago, two years afterward sailed for Mackinaw, entered a little river in Michigan, erected an altar, said mass after the rites of the Catholic church, and half an hour afterward—

Alone in the darkling wood,  
Amid the cool and silence, knelt down  
And offered, to the Mightiest solemn thanks and supplication ;  
Then fell asleep and was no more.

FORTY YEARS AGO, AND NOW.

More than one hundred and fifty years after his death, there were still extensive bodies of pine timber along the north branch of Chicago River and the lake shore, and at that same time (only a generation ago), there were towns in New York which had their forty odd saw-mills, and were as prosperous then as many lumber towns are now.

Their trees have been cut down ;  
Their saws have rusted out for want of use ;  
Deserted mills mourn all their moveless wheels.  
The cities that have thriven wondrously  
Before the source of thrift was swept away,  
Faded and perished,

and so large districts of our country are left nearly stripped of timber.



## SUPPLY OF PINE TREES IN THE UNITED STATES.

Maine, the Pine Tree State, has but three or four years' supply of pine uncut. In the other Eastern States the pine is practically exhausted, except in Pennsylvania, which, it is estimated, has fourteen years' supply.

There are vast tracts at the South and on the Pacific slope. California, at the present rate of cutting, has one hundred and fifty years' supply. Arizona has in its center an extensive pine forest, and is supplying Old Mexico with lumber. Of the Southern States, Arkansas has three hundred years' supply; Texas, two hundred and fifty; Mississippi, one hundred and fifty; Louisiana, one hundred; Alabama, ninety; Georgia, eighty; North and South Carolina, each, fifty, and Florida thirty. Of the Western States, Wisconsin has twenty years' supply; Minnesota ten, and Michigan eight.

## MINNESOTA, WISCONSIN AND MICHIGAN REDUCED TO FEET.

Estimates give Minnesota 6,000,000,000 feet of pine, and Wisconsin 41,000,000,000 feet. Michigan has 35,000,000,000 feet, which may be divided up as follows:

On streams emptying into Lake Huron.....	8,000,000,000
On streams emptying into Lake Michigan.....	14,000,000,000
Making in all in the—	
Saginaw District.....	22,000,000,000
The Upper Peninsula.....	6,000,000,000
Balance of State.....	7,000,000,000

## PRESENT PRODUCTION.

The following will give a rough idea of the yearly lumber product at prominent points in feet. The exact figures would be larger, as shingle and lath are not included in some of the footings.

Saginaw Valley.....	938,675,078
Alpena and Oscoda.....	203,319,524
Manistee.....	235,590,693
Ludington.....	134,945,195
Muskegon.....	582,087,530
Grand Haven.....	198,092,190
Eau Claire.....	460,066,421
St. Croix.....	255,666,236
Minneapolis.....	427,816,621

## MAGNITUDE OF THE BUSINESS.

Some idea of the magnitude of the business is obtained when we consider that there are 50,000 men employed in the lumber and salt business in Michigan alone, the annual cut being now 4,000,000,000 feet, or one-quarter of the product of the whole country.

## THE OLD AND THE NEW WAYS.

The earliest record we have of the lumber business is in Solomon's time when "Hiram cut down cedar and fir-trees from the forest in Lebanon and had them brought to the sea and floated down to Joppa; there Solomon had his people take the wood and bring it safely to Jerusalem, where he built the temple of cedar wood, wonderfully carved and inlaid with gold."

Solomon bought his logs.

Lumber dealers in our day buy forests by the square mile and cut down their own trees, have them floated to their own mills, and some of them even own the vessels and railroads which bring the product to market.

## CAMPING IN THE WOODS.

Let us look at one of their lumber camps in the woods. There are twenty-five to one hundred men, living in log huts and sleeping in tiers of bunks, the whole arrangements suggestive of army life.

They must work from four in the morning until six in the evening, and generally be satisfied with boiled potatoes and salt ham or pork, although some lumbermen provide as good "chuck" as can be found in some hotels. Their evenings are passed telling wonderful yarns, writing letters, mending mittens and clothing, and preparing for the next day's work, the wind whistling through the trees, while the red blaze three feet long is coming out of the stovepipe, the stove itself being "panting red."

Quite a number of the criminal classes find their way into the camps and occasionally into the mills, but the average lumberman is "good tempered in spite of his prolific and aimless profanity, generous to a fault, hospitable beyond his means," and many of them wide awake, trusty, farmer's sons.

## FROM THE TREE TO LUMBER.

The trees are cut down and into desired lengths by saws, then hauled to the skids, hoisted on them with the aid of their peevys, and rapidly rolled to the main roadway, where strong horses attached to immense wheels in summer and sleds in winter haul the logs to the river, ready for their spring voyage down the stream to the mills.

## CHEAPENING THE COST.

New inventions have supplanted the old and slow methods of cutting timber, sawing the logs, and getting the product to market.

The ax has been supplanted by the flexible saw, by which a gang of three men can cut 200 logs a day, while with an ax 90 logs was considered a good day's work.

At the mill, there is the gang-saw with its thirty upright blades, cutting four large logs at once, making boards of them in less than three minutes; the chisel buzz-saw, six feet in diameter, which slabs a log fifteen

feet long in less than three seconds; saws cutting slantwise; saws working on curves; saws with reverse action, and other machines and machinery cheapening the cost of the mill products.

#### TRANSPORTATION CHEAPENED.

Increased railroad facilities for getting logs to the mills, as well as the lumber to distributing points, have also brought into market large tracts of timber heretofore considered inaccessible because not near to water. In consequence, although there is a marked reduction in consumption, and stocks of lumber are steadily increasing, the mills are running to their full capacity, credits have been extended on sales beyond a desirable limit, and there is no longer any profit on common grades of lumber at whole-sale.

#### REPORTS FROM DELEGATES TO THE LATE LUMBERMEN'S CONVENTION AND OTHERS.

At Minneapolis the boom extends three miles from the mills. Every log felled this year is surplus. There are 50,000,000 feet more than last year, the present stock of logs and lumber being sufficient for this and next season, and, as there is not enough capital to fall back upon, *lumber must be sold* even at a loss.

On Gull River, Minnesota, lumbering will be lighter than it has been for years. One concern got out last season 26,000,000 feet; the coming season they do not expect to cut over 8,000,000, giving as a reason the increased stock of lumber on hand and poor business.

In the Eau Claire district, the same condition obtains, lumbermen there saying "present prices mean ruin to somebody."

On the Mississippi, Dubuque reports that for two years the cut of logs has been only from one-half to two-thirds the capacity of the mills (and there is no doubt that other places on the river are in the same condition and ready to shut down their mills).

Eastern Wisconsin reports that at present prices there is only loss.

Western Michigan says they cannot afford to cut trees at present prices.

In the Saginaw Valley it is said: "There seems to be a craze among lumber people to get rid of their property."

Michigan City, Ind., has 15,000,000 feet, mostly of common grade, stored there by Muskegon lumbermen.

Chicago has 40,000,000 feet more on hand than last year at this time.

In Canada over 150,000,000 feet of lumber is held on the piling ground at Ottawa, there being no demand for it in the United States, for which market it was cut.

Shipments of white pine from Quebec this season have fallen off fifty per cent. as compared with last year, and oak lumber fifty-nine per cent. less than in 1883.

There is abundant evidence that there is too much lumber in the country; that there is a large amount of *coarse* lumber which cannot be sold at a profit, and that to carry it over until another year involves great expense. Some of the mills will shut down earlier than usual this fall, and it was recommended by the recent Lumbermen's Convention that not over sixty per cent. of the amount of the cut of 1883 be got out the coming winter.

This will throw thousands of men out of employment, with but little opportunity to prepare for the future. It was proposed to put the men on half pay, but the suggestion met with no encouragement.

#### PRESENT CONDITION.

The condition is full of danger to underwriters. A market so overstocked that "lumber must be sold or carried over at great expense," is a poor one for underwriters to speculate in.

A business which allows of the employment of an undue proportion of rough men, some with bad antecedents, needs constant watching even in prosperous times, but in times of depression the moral hazard becomes an uncertain quantity, and in some localities a constant menace. When a man can say to his business associates without rebuke, "No mills have been built at my town, and unfortunately but one burned," adding, "*it was well insured, however,*" interested carelessness, or more direct methods, will soon make easy adjustments in that class of business. Recent events have reminded us that

A little fire is quickly trodden out,  
Which, being suffered, rivers cannot quench.

Big Rapids, Dubuque, Toledo and Cleveland have already had disastrous losses.

#### WHAT SHOULD BE DONE TO PREVENT LOSSES ON LUMBER?

Full time should be allowed adjusters to investigate the origin of every fire as well as the standing and condition of the assured, and companies should wait the full sixty days before paying any loss.

As to risks not in force, there should be critical inquiry as to the circumstances of the applicant and his personal reputation.

If any of the owners or foremen are arbitrary or obnoxious to the men, if any convicts or bad characters are employed (and we know there are such, both workmen and superintendents), all policies on or near the property should be taken up.

If practicable, one or more inspectors might be employed in each district to make close inspection of the lumber piles and guaranteed spaces. The rules might be modified so as to allow some latitude where there are temporary dead-piles; but, until changed, a strict construction of the rules governing space clause agreements should be insisted upon.

## THREE-FOURTHS LOSS CLAUSE.

In future policies, or where it is desirable that those in force be rewritten, the three-fourths loss clause should be insisted upon. In advancing rates, if it is possible to discriminate in favor of districts where losses have not been excessive, it should be done.

A larger allowance might be made where fire facilities outside the mill are superior, including ample water supply and two or more fire-tugs, but no attention should be paid to requests for reductions where there is not abundant evidence of substantial improvement. The absurd method of charging the same rate on lumber, whether exposed by a ten or a two per cent. hazard, or whether a single or compound hazard, should be corrected.

Additional charges should be made for large areas, whether with one or more owners, with or without the three-fourths clause, and also a large advance, by per cent., on lumber with less than 200 feet space clause.

With the present irregularities of the schedule remedied, and then applied so strictly and impartially that no Special Agent or committee can so manipulate rates as to favor any company or Local Agent, no material advance is needed on mills.

## CHANGES OF BASE.

There are important changes going on which will change the character of lumber and mill interests in some directions. I have called especial attention to the estimate *by feet* of amount of pine in Minnesota, Michigan and Wisconsin.

## MICHIGAN.

The annual cut in the Saginaw Valley, in Michigan, is given at 2,000,000,000 feet, with a supply of 22,000,000,000. The Upper Peninsula would show a smaller cut proportionately.

In the balance of the State, which would include Manistee, Big Rapids and the country north and south of them, over 1,500,000,000 is given as the annual cut, while the supply uncut is but 7,000,000,000 feet, and much of that culled. It has been recommended that what is left of pine yielding common lumber, in Michigan, should remain uncut from ten to twenty years.

A Michigan firm who paid out \$460,000 in 1883 for wages alone, states that there is no margin on common lumber; and 80 per cent. of all the lumber cut in Michigan is *common*. The supply of good timber being small, Michigan lumbermen are buying thousands of acres of land in Alabama and other Southern States, and preparing to introduce their lumber to market. It may be stated here, that the united area of the States south of Maryland and the Ohio River is given as 500,000,000 acres, of which 400,000,000 acres are forest land.

RAILROAD FACILITIES.

The Chicago, Milwaukee & St. Paul and the Chicago, St. Paul & Omaha Railroads have extended their lines into the heart of the pine region. The facilities they offer for shipping lumber direct from the pineries are now so good that there is every inducement to manufacture in the contiguous territory.

The freight charges from Eau Claire to points in Kansas and Nebraska are about the same as from Dubuque or Rock Island. In consequence, the milling interests on the Mississippi River are likely to become comparatively unimportant, and the lumbermen at Dubuque, Rock Island, Muscatine and other points are becoming largely interested in the vicinity of the Wisconsin pineries about Eau Claire and Chippewa Falls.

In these new fields, and others where *good* timber is abundant (the better quality of lumber always being salable), insurance ought to be desirable; but we should touch lightly, or avoid altogether, districts where the course of trade or other causes are tending to make the business unprofitable.

To meet these ever-changing conditions, we should exercise the greatest vigilance, remembering that "The best exertion of a fallible judgment may not prevent disaster."

The President—

We will now have a paper prepared by Mr. J. T. Dargan, of Texas, which will be read by Mr. T. H. Smith.

Mr. Smith then read the paper, as follows:

THE ESSENTIAL DIFFERENCE OF THE FIRE HAZARD IN THE UNITED STATES AND WESTERN EUROPE.

MR. PRESIDENT AND GENTLEMEN:

It is not my purpose to deal in figures or statistics; neither have I any sudden or startling doctrine, principle or discovery to announce. I merely wish to state some homely truths—truths which are so familiar that I think their very familiarity causes them to be overlooked, or at least largely underestimated, in our business of fire underwriting.

It is a generally accepted truth, that the loss ratio on property similarly located and protected against fire is much less in Western Europe than it is in the United States. Owing to the large amount of wood used in the construction of buildings in the United States, and its very limited use in Western Europe, it would not be fair to compare the aggregate loss ratio of the two countries, or any part of them; but it would be entirely proper to compare the loss on brick buildings occupied for similar purposes, say in England, as against those in the State of New York. I have

never seen any figures bearing on such a comparison, but I believe I am safe in saying that risk for risk, class for class, the loss ratio, say in England, is much less than in New York State; is much less in France than in Ohio or California, or any part of the United States.

I recently took a trip across the water, not as an underwriter, but merely as one of that horde of tourists that go thither for objects and purposes that are nowhere so aptly described as in Mark Twain's "Tramp Abroad." I made no close investigation into anything, merely taking a dip into this and that, without digesting anything I saw or heard thoroughly. However, while thus skimming along, my attention was more or less naturally directed to some of the phases of fire underwriting among our European brethren, and nothing is more striking than the relative fire hazard of the two countries. It did appear strange how those old buildings along the Cannongate, in Edinburgh, or the Judenstrasse, in Frankfurt, should stand for ages and still appear to be good for ages to come, when the same buildings in the United States would have burned up long ago. Then there are those old tumble-down buildings in the Faubourgs of Paris, simply crowded from top to bottom with everything conceivable, all of which are insured at a profit to the companies, at a rate that is simply incredible to the American underwriter. In fact, in America an underwriter would no more think of insuring many of them at any rate, than he would of flying.

Now, what makes this difference in the fire hazard of the two countries? Certainly it is not in the moral hazard, for I candidly believe that on this score the hazard among the masses, on the whole, in the United States, is even better than in England, Scotland, France or Germany. The average man of business abroad, I believe, has fully as much cupidity, and certainly a stronger and keener desire to make money, than the average American tradesman. Where, in the world, will the shopkeeper take more advantage of you than in Paris? And if he does it with his customers, certainly he will have as little conscience in dealing with an insurance company. So it is certainly not better principle or moral rectitude that is the prime cause of this minimum fire loss in Western Europe.

In the next place, it is claimed by some that the greater care bestowed by our European brethren on everything they handle or do is the true and bottom cause for their great exemption from fires—that this is due to the crowded population and consequent greater struggle for existence; also to climatic causes. These causes certainly have their effect. The average American is in many respects reckless. If he makes money freely he spends it freely. If the European makes it freely he appears to hold on to it even stronger. At every hotel or store the last centime or pfennig is demanded, and this saving and care is carried into every detail of life. Then again, the climate is a novel one to the American. The average European can't appreciate what a very hot or a

very cold day in the United States is. During mid-summer the American finds his thick flannels and overcoat not only comfortable but necessary in London, Paris and Frankfort. I had heard of "Sunny France," but it is certainly a misnomer in comparison to the intensely bright skies of America. Then, in winter, snow seldom ever falls in London, much less Paris, so in this happy mean, between great heat and cold, the human body receives its fullest development. I may be wrong, but it does seem to me that nowhere in the world is the Caucasian more in his native habitat, or more thoroughly developed in his physical symmetry, than in Western Europe. This perfect development surely causes less lethargy and carelessness in all the details of life than characterize the average inhabitant of the United States, yet it does appear almost unreasonable to find a more careful people on the face of the globe than those of New England.

I do not believe, though, any or all of these causes satisfactorily reach the true and essential difference of the fire hazard in the United States and Western Europe, and the reason I think so is, that as I understand it, this comparative loss ratio on property similarly situated was much less, say thirty or forty years ago, and going back that far the difference in the fire loss of the two countries was not near so marked as it is to-day.

So in trying to differentiate and get at this essential difference, it appears to me to lie in a cause or causes that have arisen in this country in the past thirty or forty years.

Going back that far we find that fire underwriting in the United States was virtually in its infancy, although many companies date back full seventy-five years or more. In the past twenty-five or thirty years the business of fire insurance has advanced in this country with such giant strides that it has injected itself into every artery of trade, commerce and property. The pessimist would say that the increase in the loss ratio is solely due to fire insurance itself; that for purposes of gain many burn themselves out fraudulently and criminally, and that fires would practically cease if every fire insurance company was banished from these shores. This I do not believe at all. Like many of the benefits of civilization, bad men may frequently use their fire policies for criminal gain, but it is not true of the country at large. I still believe that the axiom in political philosophy, that crime decreases almost in the same ratio as illiteracy, is substantially true, and that in latter years there has been a gradual, but a sure improvement in the morals of the people of our country at large. It is true that our great civil war may have somewhat upset the moral tone of the country, but in the twenty years that have elapsed, these causes or sequences have by degrees become almost or practically obliterated. But here, in times of the most profound peace, when values are settled, when there is no further clashing of races or sections, and when even a presidential campaign cannot stir up any excitement, fires keep up with a persistency that, to many, is alarming.



Some underwriters declare that the passage of a general bankrupt law would improve the moral hazard, which, they claim, is the bottom of the trouble; but, at large, I do not believe the effects of such a law on the loss ratio would be hardly appreciable. The essential difference in the fire hazard we are discussing, and which accounts for the large increase in fires for the last thirty or forty years, I think, is certainly due to the comparatively limited use of *coal oil* in Western Europe, and its unlimited use in the United States.

During a trip of several months abroad, I did not see a single coal oil lamp in use. This was true not only of the larger cities, but of the smaller provincial towns. Where gas is in use, it is for lighting up halls, dining and sitting-rooms; but, on retiring for the night, you are almost invariably handed a short candle, some four or five inches long, and next morning you are invariably charged for the everlasting *bougie*. It is true, a good deal of coal oil is imported from the United States, but it is not a drop in the bucket compared to its enormous use over here. Thirty or forty years ago the use of coal oil in this country was almost *nil*. To-day, probably, nothing in our commerce or trade is so widespread or universal in its use, and so much ingenuity has been expended in its distribution, that in the remotest parts of the country it is a marvel of cheapness. Side-tracked at almost every railway station is found the invariable flat-car, with its wrought-iron tank containing several thousand gallons of oil. From this tank, a wagon with a smaller tank draws its supply, and from the latter it is delivered in bulk to every storekeeper in the town or village that wants it. Largely through the influence of underwriters, local authorities frequently try to control the quality of oil in their vicinity, but we all know that this prohibition of the lower grades of oil is very slackly executed, and that the average inhabitant usually gets the cheapest oil, and pays little or no attention to its quality.

Then we can hardly appreciate or realize the enormously varied use it is put to. Many families who find their oil disappearing fast, will discover that the cook or servant is using it to start the morning fire, and even if warned against its use, it is so convenient and saves so much trouble, that they will use it slyly anyhow. Then the housewife, who cannot afford a servant, will bring out the little gasoline cooking stove, and we all know the enormous sale these stoves have had, and the lives and property they have destroyed. But this veteran giant of destruction, *King Coal Oil*, strides about but little during the sunlight in his work of destruction; he reserves his heavy work for the shades of night, when thousands of hills and vales are lit up by the remorseless destroyer. In the larger cities, where gas or the electric light is convenient or low-priced, not so much damage is done; but in the smaller cities or hamlets, where there are none of these lights, or, if present, are high-priced, the destruction is simply terrible.

Forty years ago the flickering tallow candle was our common light, but where is it to-day? It is such a scarce article that the younger generation hardly know what a candle is. On the other hand, their manufacture and sale is an enormous item in Europe.

To clearly appreciate the relative danger of coal oil and candles, I merely state this proposition, which is probably not an overdrawn one, in the comparison of Western Europe and the United States: 25,000,000 glass coal oil lamps, burning nightly, *vs.* 25,000,000 candles, burning nightly; which will produce the largest number of accidental fires? There are certainly this many glass lamps burning nightly in the United States, and is there any question at all about the larger number of fires they would cause?

Unfortunately, a substantial metal lamp cannot be made (except at great cost), that will prevent oil from leaking, so glass is universally used, and a small amount of heat or a slight accident will shiver it to pieces. Even with great care there is liability to frequent accidents, that never occur from candles or gas. My own personal experience is not dissimilar from the average man. With a small house and household, I use at least six lamps nightly, *viz.*, one each in bed-rooms, dining-room, kitchen, servant's room, hall and sitting room. I buy the best quality of oil I can find, but even with care I have had, at least a dozen times in the past five or six years, accidents which would have been serious if not promptly remedied. The supply of oil in the lamp, on growing low, renders the metal part of the lamp heated; again, the wick may not properly fit, and the flame works its way down into the lamp; and then, sometimes, apparently without any cause, the flame will get very large, and thereby heat up the lamp and threaten an explosion. These accidents do not occur with the metal "student's lamp," and it is unfortunate they are not more universally used.

I think a large number of midnight fires that companies class as "unknown," and which frequently are supposed to be fraudulent, are really accidental, and are traceable to coal oil in some shape. It is a common practice in a great many sections of the country where there is no gas, or where gas is high-priced, for a merchant to leave a coal oil lamp burning all night on his counter to scare off thieves. Is it unreasonable to suppose that these lamps left unattended cause many fires? Again, many merchants are careless in leaving, in the back part of their stores, a lot of oily rags and rubbish where the lamps are filled and trimmed, and from the careless throwing of a match or cigar stump, a good sized fire is started. Another practice is for families with children to keep lamps burning all night, and dwellings are frequently burned from this cause. Another queer circumstance is, I do not believe there is *one incendiary fire in a thousand* in the United States that is not caused by coal oil. It is not always an easy job to start a fire without coal oil that will burn up a building, but

a few cents' worth of the latter will promptly do the work. In the investigation of fires, as an underwriter, I don't recollect ever seeing an incipient fire, that was clearly incendiary and which was extinguished, that was not traceable to the use of coal oil. Another enemy the underwriter has, are the hordes of patent gasoline gas-machines that are flooding the land. They are all more or less dangerous, and are, at best, but one degree removed from the ordinary lamp in the way of safety. A striking example of this was the recent loss of the Montezuma Hotel at Las Vegas hot springs, New Mexico. The fact is generally recognized by underwriters, that of all our lights in universal use, the two only reliable kinds are from coal gas and electricity.

I mention but a few of the damages that coal oil causes, but we all know and recognize that it appears to be in every nook and corner of the country, and its uses and abuses are so enormous and varied that they simply cannot be enumerated.

Now, with all this damage, present, past and prospective, King Coal Oil may ask us the same question that Boss Tweed did his accusers: "What are you going to do about it?" Nothing, at least more than has been done by our trying, as underwriters, to limit the quality of coal oil in our policies, although even this, in a large measure, for practical purposes, is a dead letter, for, as a rule, how is the oil going to be tested when the fire is over? We can't control this matter even if we wanted to. We are not kings or priests. Ours is not to lead, but to follow; to take things as we find them, and make our business to conform thereto. We can by discriminating charges sometimes influence this or that movement, but this tidal wave of coal oil that has swept over the country is simply irresistible.

Yet, with all its troubles, in a double sense, it is not an unmixed evil.

1. Although we are underwriters, it is not proper for us as citizens of this great country to square everything by dollars and cents, or how it affects our business. I was recently struck with an article on coal oil in *The Century* magazine, where the writer claims that probably nothing has done more for the elevation of the masses of our country in latter years than coal oil. It furnishes a cheap and excellent light for the laboring man and family, when after the day's work they can read and study with comfort, instead of having their eyes nearly put out with the old-fashioned tallow candle, and, in consequence, nothing has done more for the cause of common education. So, with the troubles and loss it may cause in one direction, it is more than compensated in another.

2. While it has caused us immense loss, probably nothing has more popularized and made fire underwriting of such immense size and importance in the United States than coal oil. An old prominent Boston underwriter used to say he did not regret the frequent and enormous fires that swept over the country, as it simply advertised fire insurance the more

and made the business that much better. This is unquestionably largely true, and if companies are made bankrupt, it should not be properly chargeable to fires *per se*, but simply because they have sold their goods below cost. Just as the merchant does, let a proper figure be charged, not only to cover prime cost but also expense, as well as a margin for profit, and we will be successful. As a matter of public interest and policy, these frequent and enormous fires are to be regretted in having that much wealth of the country entirely blotted out; but to the underwriter, in the abstract, they are no injury, in fact are a benefit to his business, if he can only gather in premiums enough to pay his losses.

What these premiums should be, therefore, is what most concerns us, and if companies would only steadily keep this in view, study their classification registers closer, and go into tariff associations and unions prepared to advocate proper rates and practices, without trusting blindly to luck to help them out, there would be fewer liquidations and more dividends paid to stockholders.

As a lesson or corollary to be deduced from the foregoing, the question may be asked, "What will be the loss ratio of the future in the United States?" I say as long as our oil wells hold out, and they appear to be inexhaustible, we may look for no large decrease, as far as class and class of risks are concerned; in fact, I believe in the next five years our loss ratio on the average will be fully as large or larger than in the past five. Many underwriters go along in a sort of hap-hazard way, hoping, by good luck, fires will suddenly cease and let them have a good run, but if we can forecast the future from the past, and it looks very reasonable, those who look and feel this way are sure to fall into a ditch that they will never get out of. Some trust that good crops will improve matters and reduce losses; others that a bankrupt law will; others that a proper protective tariff will be an entire solution of the whole problem; but all of these are certainly, to say the least, largely visionary. In the past five years the country has been on the whole blessed with bountiful crops, values have become settled, and the whole land has enjoyed a run of peace and prosperity that cannot be expected to be improved upon. Crops may fall off here a little and there a little, but there has been nothing on the whole to disturb trade, property, commerce or values except to better them. Those underwriters in different parts of the country who want to bear rates, I think must get little comfort out of these deductions, for they clearly favor and prove the bull side of the question, and that the latter is not only proper, but simply absolutely necessary for the protection and furtherance of the great interests which we are entrusted to represent.

So far I have stuck reasonably close to my text, but I think I may be pardoned, in conclusion, in straying therefrom to express the sentiment of probably every American underwriter who has ever crossed the Atlantic, viz., that for work and interest, Western Europe bears no comparison to

this magnificent country, the United States. We may have our drawbacks and may not have all the comforts of an older civilization, but who is there who does not prefer our fresh, tremendous and undeveloped field, growing in wealth at the rate of some \$125,000,000 a month, to the smoother and well-worn paths of Europe?

The President—

Are the committees ready to report that were appointed yesterday—one on the Prevention of Fires, and the other on the Three-quarters Clause? (No response.)

Mr. W. F. Ross—

I have not had any time to think about what I am going to say, but the question has been propounded, "What are you going to do about it?" and it has not been answered. What are we going to do about it? There is very little practical value, probably, in raising questions without giving an answer of some kind. I don't know that there is any practical way of meeting this question, but I think it possible that by the united effort of underwriters it may be met to some extent. It is impossible to do away with the use of kerosene. It is also impossible to do away with the use of gasoline. Where it has once been introduced people find it so convenient, so clean, and so inexpensive and harmless that they will use it, whatever you may say about it, just as they will use steam pipes next to wood, and you cannot make them believe that it will set the house on fire. Now, it has been suggested that the interest of the underwriter is not to reduce fires, or carry it to such an extent that his capital will be gone. I take it that the interest of the underwriter is not so much to reduce fires, as it is to do away as much as possible with great conflagrations, which cannot be taken into the account of his premium. How are we to do away, in a measure, with conflagrations? I think it may be reached in the same way that explosions from gunpowder are prevented, namely, by requiring that kerosene and gasoline be stored away from the thickly settled portions of the village, town or city. In this connection I might also add that the cause of a great many conflagrations undoubtedly would be removed by requiring that piles of lumber be kept out of towns and cities. I question very much whether the difference in losses in England and America is altogether owing to kerosene, however. I apprehend that the dampness of that climate has a great deal to do with that. We have a very dry atmosphere. Sometimes when we have a long heated term and no wet weather, we are sure to have large conflagrations, and frequently. We have, in Iowa, a law requiring the inspection of every barrel of the produce of petroleum sold for illuminating purposes. That law is partially in force in Illinois, but it is optional with every city to apply it or not, as they see fit. Now, I think that if every underwriter

would use his influence—if every member of this Association would use his influence with his Local Agent to have every town and every city adopt a law requiring that kerosene and gasoline and lumber be kept outside and away from the settled portions of the city, so that they would not endanger it, we might at least do away with many great conflagrations.

The President—

Are there any other remarks, gentlemen, upon the papers that have been read? (No response.)

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Mr. Milo E. Lawrence—

The committee to whom was referred that portion of the President's address referring to the death of Merwin F. Collier, beg leave to submit the following report:

The committee to whom was referred the subject of memorial notice of Mr. Merwin F. Collier, of Kendallville, Ind., feel that they cannot fulfill that duty better than by presenting to this body a brief summary of his career, and the resolutions adopted by the Indiana Association of Underwriters, whose membership were for many years the intimate associates of the deceased, and they recommend that the same be spread upon the records of this Association, and that the Secretary notify the family of the deceased of this action, with assurances of our condolence in their loss.

Merwin F. Collier was born in Ohio, Nov. 27, 1830, and died at his home in Kendallville, Ind., March 29, 1884, being at the time in his fifty-fourth year. He served his country during the Rebellion in the capacity of captain in the 100th Indiana Regiment, and was wounded in the service, which resulted in the partial loss of sight. His underwriting career embraced a period of a quarter of a century. He was for many years the esteemed State Agent for Indiana for the New York Underwriters' Agency, which connection was severed during the past year, when he identified himself with the Germania Fire Insurance Company, being in the service of that company at the time of his death.

J. IRVING RIDDLE.  
MILO E. LAWRENCE.  
D. F. APPEL.

IN MEMORIAM.

At a meeting of the Indiana Association of Underwriters, held May 30, 1884, W. H. Seiders, Esq., announced to the members of the Association that the death of M. F. Collier, a member of this Association, occurred on March 29, 1884, and moved that a committee of three, of which the Presi-

dent of the Association should be one, be appointed to prepare and present to the Association suitable resolutions upon the death of our respected member and co-laborer, and report the same at the afternoon meeting, which service was performed by the committee presenting the following:

WHEREAS, The Indiana Association of Underwriters has learned with sorrow of the death of our esteemed worthy member and co-laborer, Merwin F. Collier, which occurred at his residence, at Kendallville, Ind., on the morning of March 29, 1884, and desiring to give expression to the sentiments of high regard for the deceased which are held by each member of our Association towards our departed friend, and sympathy for his bereaved family, do hereby

*Resolve*, That by the death of Mr. Collier this Association has lost one of its original members—a faithful and judicious underwriter, one possessing, in a rare degree, the ability to decide points which require experience and ripe judgment to determine; ever alert to the interests of the profession, and untiring in his devotion to the duties which he assumed.

*Resolved*, That this Association tender to the bereaved wife and fatherless daughters its sympathy in their hours of sorrow and mourning, and beg to assure them that in the loss of the husband and father, which to them is irreparable, so to us, as his coadjutors, we have no one to take his place in our councils. In the midst of their deep affliction we would point them to the Great Giver of Life, “who does not afflict willingly,” for that consolation and peace which He alone is able to give.

*Resolved*, That a framed copy of these resolutions be sent to the family of the deceased, that these proceedings be spread upon the minutes of this Association, and that a copy be forwarded to the insurance journals for publication.

B. KELSEY,  
W. H. SEIDERS, } *Committee.*  
H. H. WALKER.

The President—

You have heard the report of the Committee on the Death of M. F. Collier; what is your wish concerning it?

Mr. H. H. Hobbs—

I move that the report be received and spread upon the minutes of the Association.

It was so ordered.

The President—

Is the Committee on the Death of Charles Coombe ready to report? (No response.)

We have two committees to report—one on the Prevention of Fires, and one on the Three-quarters Clause. While we are waiting, if there is any miscellaneous business that any gentleman has to offer—any amendment to the Constitution, or anything of that kind—it is in order.

Mr. Holger de Roode—

I have the report of the Committee on the Three-quarters Clause.

In Memoriam.

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1884.

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Merwin F. Collier,

Kendallville, Indiana,

State Agt. Germania Fire Ins. Co.

of New York.

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Died, March 29, 1884.

Aged 54 Years.





The President: Please read it.

Mr. de Roodé then read the report, as follows:

## THE THREE-QUARTERS CLAUSE.

CHICAGO, September 11, 1884.

MR. PRESIDENT AND GENTLEMEN:

Your committee to whom was referred that portion of the President's address relating to the Three-quarter Clause, beg to report that, in adopting as a text the postulate expressed therein, "that a system of insurance which fully indemnifies the assured is radically defective," they are also of the opinion that a system whereby the assured enjoys an unlimited opportunity for cutting rates by so regulating his line as to destroy the natural expectation of salvage, is equally defective, as well as radically wrong.

In seeking some relief from the pressure of our present environment, it is questionable whether the mere advancement of rates (our only *present* remedy), is as judicious, effective, or *diplomatic* a method as the insertion of new *conditions*, which, once adopted by most companies, would soon become as *universal* as is the present *basis* of contract.

As a suggestion in this direction, we would recommend that the entire fire insurance *system* be reconstructed upon the basis of a joint adoption of the principles embodied in the "Co-insurance" and "Three-quarters" clauses, incorporating these principles in our printed policy conditions so as to effect a radical *change of base* for executing a *flank movement* upon the public—one which would enable us to adjust rates with greater satisfaction to ourselves, leave some undisturbed, *reduce others*, and make suitable changes generally, with the minimum of *violence* to public sentiment.

We have observed that where underwriters are strongly banded together (as at present in St. Louis), the introduction of the principle of *co-insurance* is one of the most valuable features of *reform*, and though a premium is offered for its voluntary insertion, its benefits to the companies are curtailed simply for lack of *compulsion*.

If it be urged that the general adoption of such conditions would present the possibility of a certain class of companies offering the old conditions as an inducement for patronage, it is proper to consider that nearly every policy form already provides, in substance, that "in case of the assured holding any other policy, in this or any other company, subject to conditions of average, this policy shall be subject to average in like manner."

Your committee beg leave to present a clause which, they think, will sufficiently express the intention of this recommendation, though admit-

ting the probable necessity of such a change in language as would meet the technical requirements of a clear, legal contract:

It is a part of the consideration of this policy, and the basis on which the premium is fixed, that the assured is to maintain insurance on the property covered to the extent of three-fourths the actual cash value thereof, and that failing to do so he shall be a co-insurer to the extent of such deficit, and in that capacity bear his proportion of the loss. It is understood, however, that this company does not consent to an insurance exceeding three-fourths actual cash value.

Should it be objected that, in view of the wide-spread use of fire insurance as a banking collateral, a three-quarter restriction would bear too heavily upon the needs of certain kinds of business and increase the difficulties in the way of proper banking facilities, we would reply, that being convinced that our proposed measures are not only wholesome, but also ethical with respect to doing the greatest good to the greatest number, we have no doubt that capital and the customs of trade would soon adjust themselves to these new conditions without any serious friction, while underwriters would enjoy the credit of strengthening a much needed conservatism on the part of capitalists. In any event, it would be preferable to first adopt general conditions of safety, and then make such judicious exceptions, by special contract, as local circumstances would warrant, than to dwell in the midst of the prevailing evils and apply the basic remedy itself as an exception for a few risks only.

Your committee would respectfully recommend that if these suggestions meet with the favor of this Association, that they be laid before the officers of such executive bodies of underwriters as are now established in various parts of the United States.

Respectfully,  
 HOLGER DE ROODE,  
 C. W. POTTER,  
 E. V. MUNN. } *Committee.*

The President—

Gentlemen, you have heard the report of the Committee on the Three-quarters Clause. It is now before you for any remarks you may see fit to make.

Mr. J. B. Bennett—

As I have had very considerable experience in the Three-quarter Clause, I will make a few remarks on it. I was the first underwriter that ever put the clause in the policy. I kept it there for some ten years and then had to take it out; and when you put the clause in the policy you will find you will have to take it out. The condition of American insurance, the outlook for the future, is such that we ought not to take a position that will drive us to the wall. There is the question, "How are you going to treat the clause?" The clause of itself has got some things practical and good. How are we going to treat it? If you are going to put it in the

policy, you are going to fail. Now, gentlemen, with the Average clause we have got the precedent of the world in Marine Insurance, and that solves the whole question, except it might be the question whether we have developed the moral hazard. We have got to be judicious and wise and far-seeing in this matter, and we have got to act in a body in regard to it. Although the suggestion of the committee may be very good, yet you will fail. The pressure will be too great on the outside. It is anti-American—remember that, it is anti-American—and we have got to get the support of the great public; and then, fire underwriting is one of the most uncertain businesses, and we have got to be careful in this matter. As has been reported here, this is a many-sided question; but everything has got its good side and its bad side, and in all these things you have got to act in such a way as to make them good currency and above par.

Mr. C. C. Hine—

If there is any gentleman here from the South, I would like very much to inquire of him whether, as a matter of fact, the Three-quarter clause is not in actual successful operation among the companies located in the South, and whether it is not a fact that all Mobile and New Orleans companies invariably insert the Three-quarter clause in their policies. I am simply asking for information upon that point, if it be possible to obtain it from any one that is in the audience.

Mr. H. F. Atwood—

It is in successful operation. In Georgia, North and South Carolina it is not embodied in the condition of the policy, but it is made in the shape of a rider. It has been an immense success in the South. Perhaps some other gentleman may be able to state in regard to this.

Mr. W. F. Fox—

In regard to this Three-quarter clause in the South, there are two characters of them—one that insures property up to three-fourths of its value and the other covering three-fourths of the loss. They are two very distinct clauses. I think the clause Mr. Atwood refers to is the one guaranteeing to keep up insurance to three-fourths of the value.

Mr. Atwood: It was not.

Mr. Fox—

Then it must be the other clause. I believe, taking it all in all, that the total insurance is the better clause for the reason that it is more elastic. The Three-quarter clause is too stiff; there is no elasticity about it. The demands of business are such that all persons would not be properly protected with three-quarter insurance only. There are certain interests that require more. I need not name them, because they will suggest themselves to you. Now, the whole insurance clause will have the same

effect as the Average clause, but it is more elastic and better for that reason. You can put a rider on by way of limitation and make it three-quarters, or any other amount you please. You have, then, by the whole insurance, all the restriction you want by simple riders, and that is better than the iron-clad inflexible Three-quarter clause. It is not every industry that could pay one-fourth of its own loss, and a man may be engaged in a business where he requires whole indemnity. Perhaps his security would not be considered as good if his insurance provided otherwise. Why restrict him to the Three-quarter clause, if in consequence he shall fail? If it be deemed best not to allow full insurance, employ a rider as to the amount to pay him, because in that case it is better than the cast-iron Three-quarter clause.

Mr. Atwood—

Then let us have both. The object of the Three-quarter clause in the South was to check incendiarism, and to check the same thing as incendiarism, carelessness.

Mr. Fox—

Do you refer, Mr. Atwood, to the Three-quarter Loss Clause or the other clause?

Mr. Atwood—

What I refer to is the Three-quarter Loss Clause. There a man stands one-fourth, large or small, and it is the best check that has ever been found. This is an old argument: When a man is found to lose by a fire, he will not relax his vigilance very much. That is where they find it of so much value in the South.

Mr. Fox—

This is a very important matter and worthy of a great deal of discussion. It is the whole nut in the problem. Why wouldn't a Co-insurance clause allow you to give ninety per cent. or ninety-five per cent., if such be the case, or seventy-five per cent. if you like, or fifty per cent.? Why wouldn't that clause, inserted in all of the policies as a permanent feature, be better than the average Three-quarter clause? I would like some members to give me their views as to why a Co-insurance clause with a rider is not better than the Three-quarter clause. I would like to hear from Mr. J. B. Bennett on that, as he is an underwriter of very large experience.

Mr. J. B. Bennett—

I think we make a slight mistake in words. There is a good deal in a definition: "Average Clause," a matter with the public; "Co-insurance Clause," a matter with the underwriters. The point Mr. Fox makes, I think, is admirable and just exactly meets the question. The only differ-

ence is in words. There may be a case presented in which you say you will only take seventy-five per cent., and it works right. In this matter we have got the support of the public, and we have got common sense and everything united without putting an iron-clad clause in the policy. They say, in regard to the South, that it is considered a final success. It may be well, as stated, if you are going to use it at all, to use it as a clause; just take and use it as a condition. Its universal application is all wrong. Mr. Ingersoll is a man of great brain. He makes humanity a god. We don't do justice to our patrons. We ought to have officers that will go heart and hand with them. They are our friends—our patrons are our friends; they are not our enemies. We have got to pin our faith upon them, and we have got to act in harmony and adopt that which will enable us to work successfully, whether it be called the Co-operative clause or the Average clause.

### The President—

The committee who were appointed to recommend an Executive Committee makes the following report:

### REPORT OF COMMITTEE RECOMMENDING AN EXECUTIVE COMMITTEE.

TO THE FIRE UNDERWRITERS' ASSOCIATION OF THE NORTHWEST.

*Gentlemen:* Your committee appointed to recommend an Executive Committee, beg to submit the names of the following gentlemen:

#### EXECUTIVE COMMITTEE.

Illinois, R. Porter, of Chicago; Missouri, S. E. Waggoner, of Macon; Ohio, Jacob Peetrey, of London; Minnesota, J. J. McDonald, of Minneapolis; Wisconsin, George W. Hayes, of Milwaukee; Colorado, D. C. Cobb, of Denver; Michigan, F. E. Burt, of Detroit; Kentucky, C. D. Thompson, of Harrodsburg; Indiana, J. Irving Riddle, of Terre Haute; Kansas, H. Clarkson, of Topeka; Iowa, T. J. Zollars, of Ottumwa; Nebraska, Thomas B. Tuttle, of Carthage, Mo.

#### AT LARGE.

I. S. Blackwelder, R. J. Smith, W. B. Cornell, J. P. Black and J. O. Wilson, all of Chicago. Resepectfully submitted,

T. H. SMITH,  
MILO E. LAWRENCE, } Committee.  
GEO. W. HAYES.

### The President—

That is the report of the committee recommending an Executive Committee for the next year. What is the pleasure of the Association in regard to that report?

Mr. H. H. Hobbs—

I move that the report be accepted, and the gentlemen elected.

It was so ordered.

The President—

There is a discussion provided for here on a subject proposed by a gentleman from Chicago, namely:

*"A policy reads, 'On wearing apparel.' Would a cork leg, a wig and artificial teeth be covered? If not, why not?"*

I would like to have some of the members give their opinion in regard to that subject.

Mr. C. W. Potter—

I would like to hear more discussion on the Three-quarter clause. I don't think there is any question that can come before an association of underwriters of any more importance than that one question, and I hope to hear more general discussion on that point.

The President—

I think the Association would be very glad to hear from Mr. Potter on it. The Chair has no wish to limit the discussion in the least. I know all of the members will be pleased to hear from Mr. Potter on that question.

Mr. C. W. Potter—

There are several parties here whom we would like to hear from; for instance, Mr. J. O. Wilson. My only question is, whether some form of policy which will make the assured suffer a portion of the loss will be eventually for their own good as well as that of the underwriters, and have the effect not only of reducing the number of losses, but reducing the rate; and whether some form of policy gotten up, not with the Three-quarter clause entirely, but with that and the Co-insurance clause combined, would not be the means of curing "what is the matter," and reducing the number of losses and also the rate. I would like to hear from Mr. Wilson and from Mr. Blackwelder.

A Member—

I would like to hear from Mr. Hine on that subject.

Mr. C. C. Hine—

My own views would run somewhat in this direction: that the Three-quarter clause is somewhat arbitrary, but that the Co-insurance principle is true and just and proportionate as between parties. My own preference would run decidedly towards the Co-insurance clause. There is precedent for it; it has always been ingrafted in Marine Insurance, and it ought always to have remained, in my opinion, in Fire Insurance. There

is precedent for it; that is, it allows a man to pay for just as much or just as little insurance as he pleases. The Three-quarter clause limits, in an arbitrary and absolute manner, one's insurance, and it would be offensive to a great many men. I have given the matter no considerable thought, and I speak merely from the impulse of the moment, without having arranged anything to speak about, being called up so suddenly; but that is about the sum and substance of my views in regard to the two clauses, my preference being for Co-insurance, because of its greater equity, and because of its greater flexibility, and because of its greater accommodation to the exigencies of trade and the needs of men who think they want much or little insurance. It gives them what they are willing to pay for, and would meet my preference decidedly.

Mr. J. B. Bennett—

I want to throw out one thought to the Association, and that is this: Fire is a calamity. You can go to any office and you can read the policies, and you will find that they don't provide for it at all. Fire is a great calamity, but the policies of insurance don't cover it. Go to your patrons and see the secondary losses that arise—the sickness, the sorrow, and the trouble and the discomfort! Every one in this room should remember that fires themselves are a calamity; that the people are suffering, and although we pay them in full, we are only able to make it lighter to a certain degree. That is the reason why full insurance should be had. Even if we should pay the full amount, the public then don't get within ten per cent. of the cash equivalent for the after-losses that they suffer; and if you adopt a cast-iron rule like that, after a time, by one way or another, it will be eliminated.

Mr. Hine—

I would like to say just one word more, and that is in regard to a question which I have heard discussed no little, as to whether under-insurance is not as large an evil as over-insurance; whether under-insurance, taking it all in all, with the losses that are paid where premiums are very small, whether the evils growing out of that are not on the whole about as much as the excessive losses that we are called upon to pay on account of over-insurance. The question of over-insurance and under-insurance is one that has not been discussed very much publicly, so far as I am aware, but it is one that is talked about a great deal among underwriters as you go from office to office.

Mr. Holger de Roode—

I have always maintained that under-insurance is by far the greater evil that we, as underwriters, have to contend with. It is perhaps proper to add that the committee, in preparing that report, were of course fully aware that a subject of such vast importance could not receive adequate



attention in the limited time that was allotted on this occasion, but so far as my views are reflected therein, I would say that they are, in the main, entirely in accord with Mr. Bennett's. In regard to the idea of Co-insurance, subject to the limitations of a Three-quarter *value* clause, the committee desired to present it before this body as a sort of a compromise measure, in the hope that it would spread into other Associations and meet with the serious thought of other underwriters, feeling that however radical their private views might be as to the advantages to be derived from the general adoption of even *unlimited* Co-insurance, some recognition was due to the views of those who contend that the possibilities for over-insurance should be checked at the inception of the contract by such regulations as will prevent the assured from obtaining *complete* indemnity, and who naturally see, in the very adoption of the Co-insurance rule, a principle leading to full insurance and the practice of which, stimulated by the policy of the companies, might lead to serious excesses.

So far as the Three-quarter limit might be an injustice to the assured, I cannot look upon it in that light; I mean, of course, from a broad public standpoint. It seems to me that when we come to look at the statistics it is but fair that the assured should carry one-quarter of the general risk himself—that much of a measure of safety being not only due to the best interests of society, but being also in the line of the general expectation of underwriters in regulating the conduct of their business. Moreover, its adoption would not inflict any general disaster upon the assured, when we consider that our business is supposed to rest upon the hypothesis that only one-fourth of the entire number of losses are total; but, because of this basic fact, and our error in permitting and even educating the assured to avail himself of the advantages growing out of it, and which were originally intended to accrue to the underwriter in connection with current rates, the proportion of *total losses to insurance carried* is constantly increasing. It is, therefore, the matter of under-insurance that we are suffering from to-day, which fact is really proven by Mr. Hine's admirable charts which we saw yesterday. They show that the volume of risk is increasing, the majority of risks generally improving, and that we have got better material to handle with our machinery than ever before. All we need, therefore, is to get more revenue into the general insurance treasury, and that we can accomplish in an indirect, but far more practical as well as *diplomatic* a way, through the medium of the Co-insurance principle, wisely regulated.

So far as my own business is concerned, give me *over-insurance* to manage in preference to under-insurance, every time, and I think the results will show all right at the end of the year. The adoption of that principle as a law of underwriting does not in any way interfere with our duties as *citizens*. We have a duty to perform, as citizens, in minimizing the possibilities as well as the evils of fire, and so improving the social fabric as to

make it possible to conduct our business with honor and profit. But it is the same with our profession as it is with any trade or business; we must handle the elements as we find them, and follow the best rules for making our business profitable to our stockholders.

A Member—

I believe the report of the committee involved two separate, distinct clauses—one to limit the amount of insurance, and the other to prevent too little insurance; two entirely separate propositions. One does not take the place of the other, or have anything to do with it. Now adopt the Co-insurance clause and you prevent parties from insuring lightly. The tendency is for them to insure for a large amount. There is nothing in that clause preventing over-insurance. The other clause is simply to prevent over-insurance, and is entirely a separate proposition. There are two or three considerations involved in the Co-insurance clause which have not been touched upon at all. Now, the question is, whether it is worth no more to insure a man who insures one-fourth of the value than it is to insure a man who insures three-fourths of the value, or nine-tenths of the value. When you put in a Co-insurance clause you announce it to every man who insures a fourth, that he has the same rate as the man who insures three-fourths or nine-tenths. There is another fault in the Co-insurance clause that has not been referred to, and that is where you insure blanket on separate risks. I am told that there is an establishment in St. Louis, where there are three separate buildings, separated by standard fire walls, insured blanketed. There is an establishment in Davenport, three separate buildings, with standard iron doors between each, that has been carried for years insured blanketed. It was a loss to the compact by being taken in Chicago, because we require the Co-insurance clause with specific insurance.

Mr. T. H. Smith—

I don't know that I wish to check off the discussion on this subject, but the time is waning and there is a matter I want to bring up now. I think our Constitution and By-Laws do not provide for a Library Committee, but such a committee was appointed a year or two ago and has been continued up to this time. We had their report yesterday. I make the motion now, before it is forgotten, so that our record may show it straight, that the present Library Committee be continued for another year.

It was so ordered.

Mr. J. O. Wilson—

I move that the committee be authorized to confer with the Board of Underwriters of this city in reference to procuring suitable library

and association rooms for this Association, with power to do what they think proper and to act in the premises. In support of this, I would like to say that it is well known at the present time that there are a number of buildings going up in the insurance center of the city, and it is probable that by uniting with the Local Board of Underwriters, if they will permit, that we might get a large hall permanently, with a library room adjoining, and the Secretary of those rooms might act as custodian. The idea seems to be a good one. We don't know how it will result, but on examining some of these numerous buildings, perhaps we can find quarters to our liking, where we could have a room for our Association meetings, and in addition to it a library-room and committee-room; something of that sort. The Association is fifteen years old, and we are in practical need of a place of this sort, and, therefore, I move you that the Library Committee have full power to act in this regard.

A Member: I second that motion.

Mr. H. H. Hobbs—

I would suggest that they confer with the officers of the Insurance Exchange of this city, and see if they cannot assist them.

Mr. Wilson—

That was my suggestion, that they confer with the Board of Underwriters.

The President—

I hope the committee, when they do get a place for us where we can have a permanent home, will select one where we will have immunity from noise. I thought when we left the Grand Pacific and came here, that we were getting into a quiet place. It seems to me there isn't a quiet place in this vast town. A gentleman made a suggestion this morning that would be a good one to act upon if this arrangement is not carried out, that we meet at Pullman next time. It is not a bad suggestion, and there is a nice hall and a quiet place.

A Member: How would Evansville do?

Mr. Bennett—

I move that we refer that to the Executive Committee.

Mr. Bennett's motion was seconded.

The President—

The motion of Mr. Wilson is, that the Library Committee be authorized to act, and your motion is—

Mr. Bennett—

That the matter be referred to the Executive Committee.

The President—

Your motion would be in the nature of an amendment, would it not?

Mr. Bennett: Yes, sir.

Mr. I. S. Blackwelder—

I hope that will not prevail. I suppose there is no objection to the Library Committee acting in this matter. There is no scheme in it, or anything of that sort. It is simply for the purpose of getting a report of what may seem to be best for the Association to do next meeting. The Executive Committee, being scattered so widely through the country, cannot take much cognizance of the matter. We never have had a quorum present. You will recollect the fact that a meeting of the Executive Committee was called here about two months ago, and I think we had about four members present, when we expected to have had a quorum.

Mr. R. M. Buckman—

I hope that will not be referred to the Executive Committee, because the members are so widely scattered that it will be impossible to get them together at the proper time. Now, during this year a number of large buildings are going to be erected. The Home Insurance Company's building, the Royal Insurance Company's building, and the Insurance Exchange building are being erected. Some one of the Boards will probably engage rooms in some one of these buildings while in the course of erection, and have them fitted up in accordance with their desires. This committee of three, being all Chicago members, can get together frequently, as they are right on the spot, and make arrangements in a similar way for the conveniences that will be necessary for this Association, and we can have things fitted up in accordance with our desires and plans. If that is left to the Executive Committee, I am afraid it will go by default, but by referring it to a committee right on the spot, I think very satisfactory arrangements could be easily made.

The President—

The debate is out of order. The proposition of Mr. Bennett was not seconded, so that the only thing before this Association is the proposition to refer the matter to the Library Committee, with power to act. The question is, shall that motion prevail?

The question was voted upon by the convention, and the motion to refer the matter to the Library Committee was adopted.

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The President—

The Secretary will now read the report of the Committee on the Death of Mr. Charles F. C. Coombe.

Your committee appointed to draft suitable resolutions regarding the death of Charles F. C. Coombe, of St. Louis, Special Agent of the British America Assurance Company, submit the following :

Having a personal acquaintance and association with Charley Coombe for the past four years, we can testify to his sterling qualities as an underwriter of more than ordinary ability for a young man. Conscientious, painstaking, devoted to his profession, he was ever willing to lend a helping hand to the elevation of the principles and practice of the business in which he was engaged. He was a true friend, quiet and unostentatious, and attached to his associates. As an underwriter, we feel his loss deeply ; as a friend, we miss him more than words can express. Therefore, be it

*Resolved*, That in the death of Mr. Coombe this Association has lost a valued member and a worthy associate. That we mourn his loss as one taken from us in the morning of life, while a bright and useful career awaited him.

*Resolved*, That a page in our printed Proceedings be set apart as a memorial of our friend, and a copy of these resolutions be sent his family as a testimonial of our respect to one whom we honored and esteemed.

W. J. LITTLEJOHN,	} Committee.
WALTER SCOTT,	
S. E. WAGGONER.	

The President—

What is the pleasure of the Association in regard to the report of the committee?

Mr. H. F. Atwood—

I move that it be accepted and the resolution adopted.

It was so ordered.

The President—

There is one committee yet to report on the Prevention of Fires. I have forgotten who took that matter in charge, but whoever did has not reported. I believe we have the reports of all the other committees. If there is no other business before the Association, we will now proceed to the election of officers.

Mr. Atwood: There is a discussion before it.

The President—

Do you mean on "Wearing Apparel," etc.?

Mr. Atwood: Yes, sir.

The President—

The Chair begs to inform the gentleman that the subject was proposed, but the members of the Association did not respond.

In Memoriam.

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Charles F. C. Coombe,

St. Louis, Missouri,

Special Agent of the British America  
Assurance Co.

---

Died, July 14, 1884.

Aged 27 Years.



Mr. George W. Hayes—

I move that that discussion be dispensed with at present, and that we now proceed to the election of officers.

It was so ordered.

The President—

Nominations for officers are now in order. I believe it is the custom of the Association to nominate the President first.

Mr. Blackwelder: I suggest the appointment of tellers.

Mr. C. W. Potter—

I think you have forgotten a little matter. You seem to have made no disposition of the report on the Three-quarter Clause. We either should receive it or reject it, and thus dispose of it.

The President—

I think it was received, and that the discussion followed afterwards. Am I correct?

Mr. Potter: No, sir. No action was taken.

The President—

The Chair begs pardon. So many of these reports have been referred to the Secretary that it is somewhat difficult to keep track of them. You have heard the report read on the Three-quarter Clause; what is your pleasure about it? A motion is in order.

Mr. H. H. Hobbs—

I move that the report be received and printed in the Proceedings.

It was so ordered.

The President—

We will now proceed to the election of officers. I will appoint Mr. Atwood and Mr. Appel tellers. The Constitution, I believe, requires that the election shall be by ballot, but nominations for President for the ensuing year are now in order.

Mr. Blackwelder—

I desire to nominate a gentleman for President who, I believe, was in it first and is about the only one left that has not been honored in some way by this Association. He has been a contributor to our literature in a very marked degree, and is a gentleman of education, who has honored the profession as an Adjuster and underwriter of large experience, and who would, I have no doubt, fulfill the duties of the position of President with entire satisfaction to the membership. I refer to Mr. W. F. Fox, and I put him in nomination.



Mr. T. J. Zollars—

I very cheerfully second the nomination of my old friend, Mr. Fox.

Mr. H. H. Hobbs—

I would like to put in nomination the name of Mr. J. L. Whitlock as President of this Association.

The nomination of Mr. Whitlock was seconded by a number of members.

The President—

The names of Mr. Fox and Mr. Whitlock are presented; are there any others? If not, please prepare the ballots.

Mr. J. L. Whitlock: Mr. President—

The President—

What is the gentleman's name, please?

Mr. Whitlock—

Whitlock! I am very thankful, indeed, to the gentleman for kindly mentioning my name, but if he will be good enough to withdraw it I will be very glad, as I don't think that I am entitled to such an honor. I don't feel that I have the time to give to such an office as it would demand. I appreciate the compliment expressed by the gentleman in his motion, but I will be very happy if he will withdraw it.

Mr. Hobbs—

A number of my friends suggested my nominating Mr. Whitlock. They object to my withdrawing his name, and we will have to ask him to stand and make the run.

The tellers then proceeded to distribute the ballots.

Mr. Whitlock—

If it would be in order at this time I would like to speak. I feel that the office of President is an honor that this Association owes to Mr. Fox, and I should dislike very much, indeed, to see any votes scattered here, or any votes lost to him. I hope, gentlemen, you will regard my request. I appreciate the compliment beyond measure, and I say to you frankly, no one ever mentioned such a thing to me as that my name would come before this Association for this position. I was never more surprised in my life. I would not have my friend Fox feel for a moment that I would run here in opposition to him, or that this was any scheme or plan to defeat his election. This is a matter that was never lispd to me until my friend Hobbs mentioned it just now, and I should be very glad, indeed, gentlemen, if you would just cast a unanimous vote for Mr. Fox.

The tellers then collected the ballots, and Mr. Atwood announced the result of the vote as follows:

Whole number of votes cast.....	61
Of which Mr. Whitlock received.....	33
Mr. Fox.....	26
Mr. Hayes.....	2

The President—

In accordance with the vote announced, it is my pleasure to declare Mr. Whitlock President-elect for the ensuing year.

Mr. Whitlock—

According to custom, I am expected to say something; but if I ever did come before an audience feeling embarrassed, especially it is at this time. As I said to you a few moments ago, I never had any intimation of this until Mr. Hobbs came on the floor and mentioned my name to this audience, and if any of you have never looked upon one who has obtained office without seeking it before, you now have an opportunity.

I appreciate the compliment more than I am able to express to you. Yet, I will enter upon the duties of the office with a great many regrets—regretting sincerely that the other brother put in nomination has not been elected in my place. I should be sorry, indeed, to have him disappointed at the result of the vote, and I hope that he will understand that the vote given me was not occasioned by any action of mine in any way, directly or indirectly. I feel that I am but an infant in this body of the underwriting fraternity. Much of the little success that I may have obtained in the different departments of the work, is due almost wholly to my association with the brethren connected with this Association. I have learned much wisdom from them, and I improve, from day to day, largely in my business upon the thoughts and suggestions that I have gathered from time to time. For this honor, gentlemen, which you have conferred upon me, I thank you. If I could do more to express my feelings in any stronger terms, I would gladly do it. I know that the duties are laborious. I know that to carry this Association through and do what is necessary on the part of the Executive Officer, has no little responsibility connected with it. You have seen fit to place me in that position, as President of the Association, and I will endeavor, so far as I possibly can, to bring no discredit upon you, but to discharge the duties devolving upon me to the best of my ability. I thank you.

Mr. C. W. Potter—

I would like to nominate Mr. J. F. Bates for the office of Vice-President.

Mr. Hayes—

I second the nomination of Mr. Bates.

Mr. W. J. Littlejohn—

I want to present the name of a gentleman who should have some recognition at our hands, and one that has been a hard worker, Mr. T. H. Smith.

The nomination of Mr. Smith was seconded.

Mr. J. F. Bates—

Gentlemen, I thank you for placing me in nomination, but on account of an unalterable determination, in a convention of this kind, not to make a contest against any member of my profession, I respectfully decline.

The President: Mr. Bates declines the nomination.

Mr. Bates—

I move that Mr. T. H. Smith be elected by acclamation; that the Secretary be authorized to cast a unanimous ballot for Mr. Smith.

The motion was adopted by the Association, and Mr. Smith was declared elected to the office of Vice-President, the announcement being greeted with applause.

Mr. T. H. Smith: You know I can't talk, so I just thank you.

Mr. George W. Hayes—

I move that the President be authorized to cast the ballot of the Association for Mr. J. C. Griffiths to be re-elected as Secretary.

A number of members seconded Mr. Hayes' motion, and by a unanimous vote the President declared Mr. Griffiths re-elected Secretary and Treasurer of the Association for the ensuing year. The announcement of the President was greeted with applause and cries of "Speech!" "Speech!"

Mr. Griffiths—

Like Mr. Smith, I can speak, but won't; I know too much.

The President: Is the office of Librarian an elective one?

A Member: No.

The President—

We are ready to receive any motions that have been delayed, or anything that may be necessary before adjournment.

Mr. Hobbs—

I move that the thanks of this Association be given to the President for the able manner in which he has presided over all the meetings of the Association, and that we take a rising vote on it.

The motion was put by the Secretary, Mr. Griffiths, and the convention in a body rose to their feet, at the same time heartily applauding, the President in return bowing his acknowledgments.

Mr. Blackwelder—

I know we all appreciate the excellent services of our Secretary, and the very gracious manner in which he has discharged his duties, and it is not as an informal compliment alone that we offer the thanks of this Association to Mr. Griffiths for the very able manner in which he has discharged the duties of Secretary and Treasurer during the last year. However, I make that as a motion.

Mr. Blackwelder's motion was unanimously agreed to, the members of the Association signifying their approbation by an enthusiastic round of applause.

Mr. Griffiths—

I thank Mr. Blackwelder very kindly for this compliment to me. It seems entirely out of order, as I am paid for all this, you know. It is a source of great satisfaction to think that in a few days I shall draw my salary. Just think of that!

Mr. Littlejohn—

Allow me to suggest that some of the members of our meeting perhaps wish to attend the Association of the Fire Underwriters on the 23d of September, and a number have suggested to me that an invitation ought to be extended to all to be present.

The President—

If there is no other business before the Association, a motion to adjourn will now be in order.

The Association, on motion, then adjourned.

Minutes of meeting of Executive Committee of the Fire Underwriters' Association of the Northwest, held at 10 A. M. Sept. 10, 1884, at the Catholic Library Hall, Chicago. President Drew in the Chair.

The following names were proposed for membership:

Thomas B. Tuttle, State Agent of the Norwich Union Insurance Company for Missouri, Kansas and Nebraska. Address, Carthage, Missouri.

E. V. Munn, Special Agent Continental Insurance Company for Wisconsin. Address, Beloit, Wisconsin.

E. M. Condit, General Agent of the Sun Fire office of London. Address, Anamosa, Iowa.

E. N. Lessey, Special Agent Continental Insurance Company for Indiana. Address, Chicago.

J. M. Hilton, Special Agent Home Mutual Insurance Company of California. Address, Chicago.

F. L. Force, Special Agent German-American Insurance Company, N. Y. Address, 159 La Salle Street, Chicago, Ill.

J. W. Robertson, Special Agent National Insurance Company of Hartford. Address, 157 La Salle Street, Chicago, Ill.

H. F. Cornell, Special Agent Sun Fire of London, for Indiana.

The President: If there are no other names, all in favor of these being proposed to the Association for membership will say aye. It was so ordered.

The Secretary: The terms for the use of this Union Catholic Library Hall, are as follows: Ten dollars a day if we don't use it beyond 10 P. M.; or, if beyond 10 P. M., twenty-five dollars a day.

Mr. George W. Hayes: I move that the action of the Executive Committee be approved, and the Treasurer ordered to make payment of the same from the funds of the Association, in accordance with the terms mentioned. The motion was duly seconded and carried.

On motion the Executive Committee then adjourned.

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Minutes of the Executive Committee meeting of September 11, 1884, at the Union Catholic Library Hall, 10 o'clock A. M.

The meeting was called to order by President Drew.

The following names were proposed for membership:

P. A. Montgomery, Secretary Western Manufacturing Mutual Insurance Company, Chicago, Illinois.

H. G. McPike, Secretary Illinois Mutual, Alton, Illinois.

W. B. Ferguson, Secretary Mississippi Valley Insurance Company, Rock Island, Illinois.

W. E. Smith, Secretary Mutual Millers' Insurance Company, Chicago, Illinois.

John A. Barnes, Secretary Commonwealth Mutual Insurance Company, Decatur, Illinois.

I. S. Montgomery, Inspector Western Manufacturers' Mutual, Rockford, Illinois.

On motion it was resolved that the above gentlemen should be recommended to the Association for membership.

On motion adjourned.

MEETING OF EXECUTIVE COMMITTEE ELECT FOR 1885.

The meeting of the Executive Committee elect of the Fire Underwriters' Association of the Northwest, held at 4 o'clock p. m., September 11th, 1884, at the Catholic Library Hall, Chicago.

Present: The President, J. L. Whitlock; the Vice-President, T. H. Smith; J. O. Wilson, H. Clarkson, Jacob Peetre, T. B. Tuttle, T. J. Zollars, I. S. Blackwelder, Geo. W. Hayes and the Secretary, J. C. Griffiths.

On motion of Mr. T. H. Smith, the President, J. L. Whitlock, was elected Chairman of the Executive Committee for the ensuing year.

Mr. Zollars moved that the next annual meeting be held the third Wednesday in September, 1885. The motion was carried.

Mr. Peetre moved that the Secretary be authorized to print the Proceedings of this year's annual meeting, and that copies of the Proceedings be furnished to the members who pay their dues. The motion was carried.

Mr. Peetre moved that the salary of the Secretary for the ensuing year be fixed at \$200. The motion was carried.

Mr. Peetre moved that the President be authorized to appoint, at any time during the year, such representatives as may be necessary to other organizations or bodies, the representatives, when appointed, to pay their own expenses. The motion was carried.

The Secretary then submitted the following report:

The receipts have been \$660.86; that would leave about \$1,000 yet to be collected, for which I, of course, intend to send out notices. Paid Mr. Drew \$57.10; he had some programmes printed in Evansville, which amounted to \$6.50; then he had his Address printed—200 copies, \$23. Expenses to Louisville, \$22.75. Postage, \$4.85. Paid John M. Ordway's expenses from Boston to Chicago and return, and hotel bill, \$69.

Mr. Wilson moved that the items be approved.

The President: That will go in next year's report.

Mr. Zollars moved that the dues for the next year be fixed at \$5. The motion was carried.

On motion adjourned.

# HISTORICAL.

## Annual Meetings of the Association.

- 1871.—DAYTON, OHIO, Feb. 22:  
C. E. BLIVEN, - - - *Chairman.*  
\*J. S. REED, - - - *President.*—R. L. DOUGLASS, - - - *Vice-President.*  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1871.—INDIANAPOLIS, IND., July 25 and 26:  
J. S. REED, - - - *President.*—R. L. DOUGLASS, - - - *Vice-President.*  
\*A. C. BLODGET, - - - " —C. W. MARSHALL, - - - " "  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1872.—DETROIT, MICH., July 18, 19 and 20:  
A. C. BLODGET, - - - *President.*—C. W. MARSHALL, - - - *Vice-President.*  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1872.—CHICAGO, ILL., Sept. 18 (Special):  
A. C. BLODGET, - - - *President.*—C. W. MARSHALL, - - - *Vice-President.*  
\*R. J. SMITH, - - - " —S. LUMBARD, - - - " "  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1873.—MILWAUKEE, WIS., July 16 and 17:  
R. J. SMITH, - - - *President.*—S. LUMBARD, - - - *Vice-President.*  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1874.—LOUISVILLE, KY., May 20 and 21:  
R. J. SMITH, - - - *President.*—S. LUMBARD, - - - *Vice-President.*  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1875.—CHICAGO, ILL., Sept. 23, 24 and 25:  
C. W. MARSHALL, - - - *President.*—J. O. WILSON, - - - *Vice-President.*  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1876.—CHICAGO, ILL., Sept. 27 and 28:  
J. O. WILSON, - - - *President.*—B. VERNOR, - - - *Vice-President.*  
C. E. BLIVEN, - - - *Sec. and Treas.*
- 1877.—CHICAGO, ILL., Sept. 19, 20 and 21:  
C. E. BLIVEN, - - - *President.*—P. P. HEYWOOD, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1878.—CHICAGO, ILL., Sept. 18 and 19:  
I. S. BLACKWELDER, *President.*—J. M. DRESSER, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1879.—CHICAGO, ILL., Sept. 17 and 18:  
GEO. W. ADAMS, - - - *President.*—W. B. CORNELL, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1880.—CHICAGO, ILL., Sept. 8 and 9:  
A. W. SPALDING, - - - *President.*—A. J. WATERS, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1881.—CHICAGO, ILL., Sept. 14 and 15:  
J. M. DRESSER, - - - *President.*—E. F. RICE, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1882.—CHICAGO, ILL., Sept. 6 and 7:  
W. B. CORNELL, - - - *President.*—J. M. NEWBERGER, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1883.—CHICAGO, ILL., Aug. 29 and 30:  
JAMES M. DE CAMP, *President.*—C. W. POTTER, - - - *Vice-President.*  
GEO. W. HAYES, - - - *Sec. and Treas.*
- 1884.—CHICAGO, ILL., Sept. 17 and 18:  
CYRUS K. DREW, - - - *President.*—T. J. ZOLLARS, - - - *Vice-President.*  
J. C. GRIFFITHS, - - - *Sec. and Treas.*
- 1885.—CHICAGO, ILL., Sept. 10 and 11:  
J. L. WHITLOCK, - - - *President.*—T. H. SMITH, - - - *Vice-President.*  
J. C. GRIFFITHS, - - - *Sec. and Treas.*

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\*Elected and entered upon their duties at this session.

# DIRECTORY OF MEMBERSHIP.

NAME.	ADDRESS.	TITLE.	COMPANY.
Abbey, A. J. B.,	San Antonio, Tex.,	Special Agent,	Home Ins. Co., N. Y.
Adams, Geo. W.,	Chicago,	General Agent,	Citizens, Pittsburg.
Adkins, W. G.,	169 LaSalle, Chicago,	Special Agent,	Niagara, N. Y.
Affeld, Chas. E.,	174 LaSalle, Chicago,	Manager,	Hamburg-Bremen Ins. Co.
Allen, E. L.,	Erie, Pa.,	Ass't Gen'l Agt.,	Ins. Co. North America.
Alverson, H. C.,	Des Moines, Ia.,	Secretary,	Pennsylvania Fire.
Appel, D. F.,	210 LaSalle, Chicago,	Special Agent,	Globe Ins. Co.
Armstrong, G. W.,	Des Moines, Ia.,	Special Agent,	Star, N. Y.
Arnold, Fred. W.,	Custom House, Providence,	President,	Union, Phila.
Ashbrook, J. T.,	Indianapolis, Ind.,	Compact Manager.	Underwriters' Agency, N. Y.
Atwood, H. F.,	Rochester, N. Y.,	Secretary,	Equitable F. & M., K. I.
Ayres, J. L.,	Warsaw, Ind.,	Special Agent,	Rochester German Ins. Co.
Bacon, F. A.,	St. Louis, Mo.,	General Adjuster.	Niagara, N. Y.
Banta, Geo.,	Madison, Wis.,	Special Agent,	Phenix, N. Y.
Barnes, John A.,	Decatur, Ill.,	Secretary,	Commonwealth Mut. Ins. Co.
Barnum, W. L.,	148 LaSalle, Chicago,	Secretary,	Millers' National, Ill.
Barton, W. T.,	22 Market Square, Providence, R. I.,	President,	Merchants', R. I.
Barrett, J. J.,	405 W. Main, Louisville, Ky.,	Secretary,	Franklin Ins. Co., Louisville.
Barry, Chas. H.,	Alton, Ill.,	State Agent,	Ins. Co. North America.
Bassett, E. J.,	1 Charter Oak Place, Hartford, Conn.,	General Agent,	Pennsylvania Fire.
Bates, J. F.,	Dubuque, Ia.,	State Agent,	Ætna, Hartford.
Beach, Ed. P.,	Springfield, Ill.,	Special Agent,	Continental Ins. Co., N. Y.
Beattie, J. H.,	26 Vine, Cincinnati, O.,	Secretary,	Howard Ins. Co., N. Y.
Bennett, J. B.,	Indianapolis, Ind.,	Commissioner,	Amazon Ins. Co.
Bentley, W. G.,	417 Locust, St. Louis, Mo.,	Sup't Agencies,	Union Com. No. 4.
Berne, J. J.,	160 LaSalle, Chicago,	General Adjuster,	Continental, N. Y.
Bigelow, C. H.,	Third and Jackson, St. Paul,	President,	Traders' Ins. Co., Chicago.
Black, J. P.,	157 & 159 LaSalle, Chicago,	Adjuster,	St. Paul Fire and Marine.
Blackwelder, I. S.,	179 LaSalle, Chicago,	Manager,	Fireman's Fund, California.
Bliven, Chas. E.,	Toledo, O.,	General Agent,	Niagara, N. Y.
Bowers, H. E.,	54 William, New York,	Manager,	Howard, N. Y.
Briggs, Theo. W.,	Appleton, Wis.,	Special Agent,	Guardian, London.
Brown, E. H.,	Kansas City, Mo.,	Special Agent,	Fire Ass'n and American, Pa.
Brown, M. O.,	156 & 158 LaSalle, Chicago,	General Agent,	Conn. Fire Ins. Co.
Bryant, Leon.,	51 W. Third, Cincinnati, O.,	Adjuster,	Westchester, N. Y.
Buckman, R. M.,	171 LaSalle, Chicago,	General Agent,	Queen and British America.
Burns, M. J.,	209 Main, Ottumwa, Ia.,	Special Agent,	R. I. Underwriters' Ass'n.
Burrows, D. W.,	Des Moines, Ia.,	St. Agt. and Adj.,	City of London Ins. Co.
Burt, Fred. E.,	34 W. Congress, Detroit,	Sup'r Agt. & Adj.,	Ins. Co. North America.
Burtch, H. F.,	Big Rapids, Mich.,	Insurance Agent.	Pennsylvania Fire.
Caldwell, W. W.,	206 LaSalle, Chicago,	Manager,	Niagara, N. Y.
Campbell, P. S.,	Louisville, Ky.,	Special Agent,	New Orleans Ins. Co.
Carroll, C. E.,	Louisiana, Mo.,	Special Agent,	Queen Ins. Co., England.
Carson, R. B.,	540 Vernon Av. Chicago,	Special Agent,	Northern Assurance, Eng.
Cary, Eugene.	159 LaSalle, Chicago,	Manager,	Lorillard, N. Y.
Case, Chas. H.,	120 LaSalle, Chicago,	Manager,	German-American, N. Y.
Caswell, Jas. H.,	158 & 155 LaSalle, Chicago	Adjuster,	Royal, Liverpool.
Chapman, E. F.,	160 LaSalle, Chicago,	Special Agent,	London & Lancashire.
Chard, Thos. S.,	157 & 159 LaSalle, Chicago,	Manager,	Germania Fire, N. Y.
Cherry, H. A.,	Des Moines, Ia.,	Special Agent,	Queen Ins. Co.
Chittenden, W. G.,	177 LaSalle, Chicago,	General Agent,	Union Ins. Co., California.
Clarke, Geo. C.,	161 LaSalle, Chicago,	General Agent,	Fireman's Fund, California.
Clarkson, H.,	Topeka, Kan.,	Special Agent,	Northern Assur. Co., Eng.
			Merchants' Ins. Co., N. J.
			London Assurance Cor.
			London Assurance.



NAME	ADDRESS.	TITLE	COMPANY.
Cleveland, H. C.,	Rock Island, Ill.,	Special Agent,	Norwich Union, Eng.
Cobb, D. C.,	Denver, Col.,	General Agent,	Western, Toronto.
Collins, Martin,	203 & 205 N. 3d, St. Louis,	General Agent,	Traders', Chicago.
Condit, E. M.,	Anamosa, Ia.,	General Agent,	Fire Association, Phila.
Coon, Levi,	Quincy, Ill.,	Special Agent,	Sun Fire, England.
Cornell, H. F.,	161 & 163 LaSalle, Chicago,	Special Agent,	Detroit F. and M. Ins. Co.
Cornell, W. B.,	Fort Scott, Kan.,	Supt. W. Dept.,	Sun Fire, England.
Cormany, W. A.,		Special Agent,	North British & Mercantile.
Coudrey, J. N.,	St. Louis, Mo.,	State Agt. & Adj.,	North British & Mercantile.
Covington, S. F.,	Cincinnati, O.,	President,	Ins. Co. North America.
Covington, Jno. I.,	5 W. 3d, Cincinnati, O.,	Supt. & Secretary,	Pennsylvania Fire.
Crabbe, Ralph,	Evanston, Ill.,	Special Agent,	Globe Ins. Co.
Cramer, A. J.,	Milwaukee, Wis.,	Secretary,	Insurance Adjustment Co.
Cratsenberg, A. A.,	St. Paul, Minn.,	State Agent,	City of London, Eng.
Critchell, R. S.,	141 & 143 LaSalle, Chicago,	Gen'l Ins. Agent,	Milwaukee Mechanics.
Crooke, Geo.,	Milwaukee, Wis.,	Special Adjuster,	German-American, N. Y.
Crooke, W. D.,	204 LaSalle, Chicago,	Manager,	Liverpool & London & Globe.
Culbertson, O. E.,	Tolona, Ill.,	State Agent,	Northern Assur. Co., London.
Cunningham, J. L.,	Glens Falls, N. Y.,	President,	Etua Ins. Co.
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*In Memoriam.*

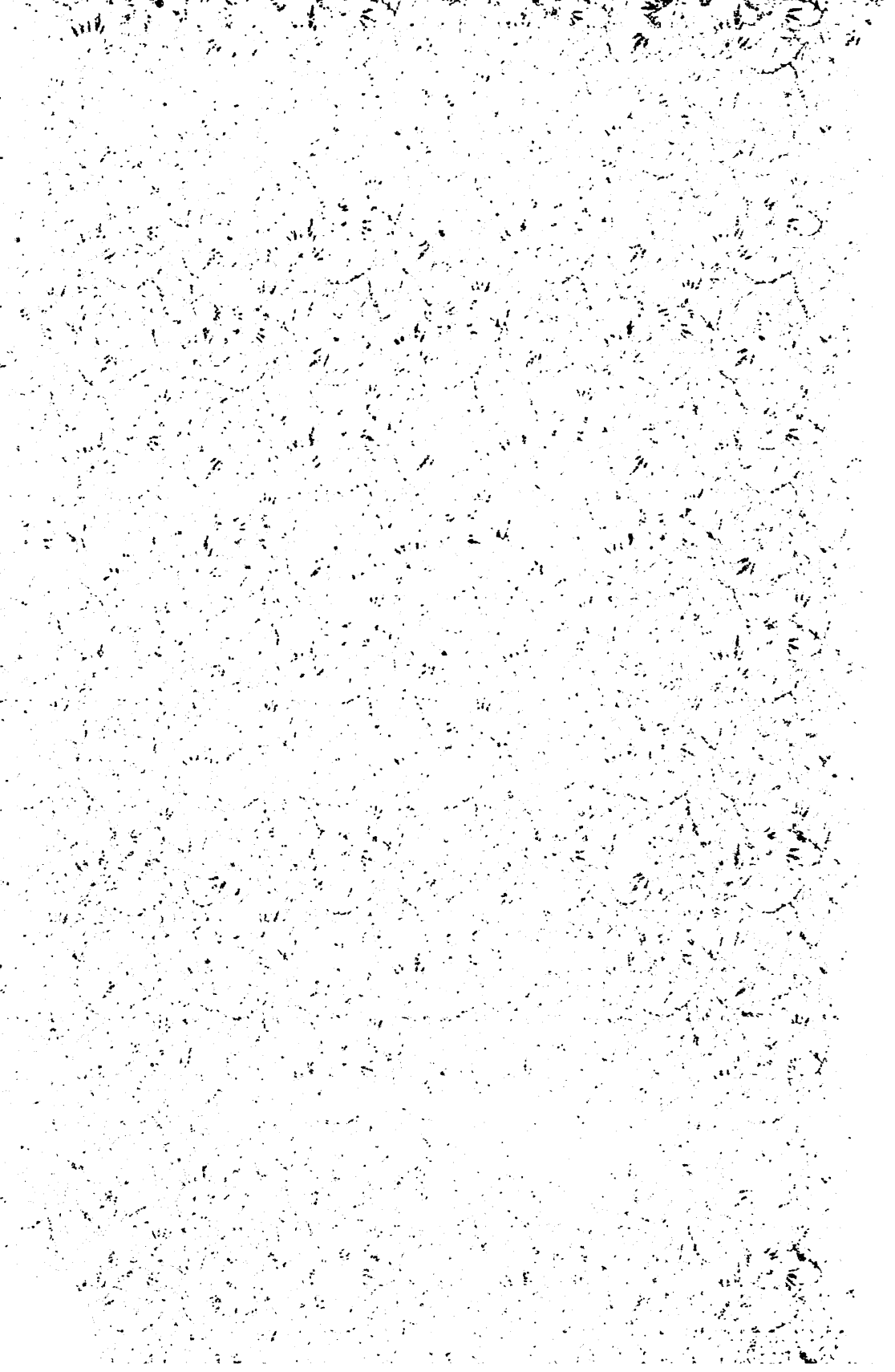
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